		DEPARTMENT	TATE OF UTAH OF NATURAL RES OF OIL, GAS AND I				FORI		
APPLI	CATION FOR	PERMIT TO DRILL	-			1. WELL NAME and	NUMBER NBU 921-25D1BS		
2. TYPE OF WORK DRILL NEW WELL	REENTER P8	A WELL DEEPE	EN WELL			3. FIELD OR WILDO	CAT NATURAL BUTTES		
4. TYPE OF WELL Gas We	ell Coalb	ed Methane Well: NO				5. UNIT or COMMU	NITIZATION AGRE	EMENT NAME	
6. NAME OF OPERATOR KERR	R-MCGEE OIL & 0	GAS ONSHORE, L.P.				7. OPERATOR PHO	VE 720 929-6007		
8. ADDRESS OF OPERATOR P.O	. Box 173779, D	enver, CO, 80217				9. OPERATOR E-MA Kathy.Schne	IL ebeckDulnoan@anad	arko.com	
10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE)		11. MINERAL OWNE		<u> </u>	_	12. SURFACE OWN	RSHIP		
UO 1189 ST 13. NAME OF SURFACE OWNER (if box 12	= 'fee')	FEDERAL IND	DIAN STATE (9	FEE ()	FEDERAL INI	DIAN STATE (
15. ADDRESS OF SURFACE OWNER (if box						16. SURFACE OWN	·	•	
15. ADDRESS OF SURFACE OWNER (II DOX	12 - 166)						ER E-MAIL (II DOX 1	12 - 1ee)	
17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')		18. INTEND TO COM MULTIPLE FORMATI YES (Submit C			NO 🗍	VERTICAL DIF	ECTIONAL (📵 HO	DRIZONTAL 🛑	
20. LOCATION OF WELL	FO	OTAGES	QTR-QTR	9	SECTION	TOWNSHIP	RANGE	MERIDIAN	
LOCATION AT SURFACE	807 FN	IL 885 FWL	NWNW		25	9.0 S	21.0 E	S	
Top of Uppermost Producing Zone	60 FN	L 716 FWL	NWNW		25	9.0 S	21.0 E	S	
At Total Depth	60 FN	L 716 FWL	NWNW		25	9.0 S	21.0 E	S	
21. COUNTY UINTAH		22. DISTANCE TO N	EAREST LEASE LIN	IE (Fe	et)	23. NUMBER OF AC	RES IN DRILLING	UNIT	
		25. DISTANCE TO N (Applied For Drilling		SAME	POOL	26. PROPOSED DEF	DEPTH MD: 9891 TVD: 9786		
27. ELEVATION - GROUND LEVEL 4942		28. BOND NUMBER	22013542			29. SOURCE OF DR WATER RIGHTS AP		F APPLICABLE	
4942		<u> </u>	22013542				1 CHINE # 43 0430		
		Αī	TTACHMENTS						
VERIFY THE FOLLOWING	ARE ATTACH	ED IN ACCORDAN	CE WITH THE U	TAH	OIL AND (GAS CONSERVATI	ON GENERAL RU	ILES	
WELL PLAT OR MAP PREPARED BY	LICENSED SUR	VEYOR OR ENGINEE	R COM	1PLET	E DRILLING	PLAN			
AFFIDAVIT OF STATUS OF SURFACE	OWNER AGRE	EMENT (IF FEE SURF	ACE) FORI	M 5. I	F OPERATO	R IS OTHER THAN T	HE LEASE OWNER		
DIRECTIONAL SURVEY PLAN (IF DIDRILLED)	RECTIONALLY	OR HORIZONTALLY	№ ТОРО	OGRAI	PHICAL MAI	•			
NAME Danielle Piernot	т	ITLE Regulatory Analys	st		PHONE 72	20 929-6156			
SIGNATURE	D	ATE 08/13/2010			EMAIL gn	bregulatory@anadarko	.com		
API NUMBER ASSIGNED									
43047512400000	A	PPROVAL			Bo	ocylll			

API Well No: 43047512400000 Received: 8/13/2010

	Propo	osed Hole, Casing, ar	nd Cement		
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)	
Prod	7.875	4.5	0	9891	
Pipe	Grade	Length	Weight		
	Grade I-80 Buttress	9891	11.6		Г
					Г

API Well No: 43047512400000 Received: 8/13/2010

	Proj	posed Hole, Casing, a	and Cement			
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)		
Surf	11	8.625	0	2460		Γ
Pipe	Grade	Length	Weight			Γ
	Grade I-80 LT&C	2460	28.0			Γ
					Τ	Т

NBU 921-25D1BS

Pad: NBU 921-25D

Surface: 807' FNL 885' FWL (NW/4NW/4) BHL: 60' FNL 716' FWL (NW/4NW/4) Section 25 T9S R21E

> Uintah County, Utah Mineral Lease: UO 1189 ST

ONSHORE ORDER NO. 1

DRILLING PROGRAM

1. – 2. Estimated Tops of Important Geologic Markers: Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:

<u>Depth</u>	Resource
0 – Surface	
1,551'	
1,839'	Water
2,207'	Water
4,816'	Gas
7,558'	Gas
8,492'	Gas
9,045'	Gas
9,786'	
9,891'	
	0 – Surface 1,551' 1,839' 2,207' 4,816' 7,558' 8,492' 9,045' 9,786'

3. Pressure Control Equipment (Schematic Attached)

Please refer to the attached Drilling Program.

4. **Proposed Casing & Cementing Program:**

Please refer to the attached Drilling Program.

5. Drilling Fluids Program:

Please refer to the attached Drilling Program.

Evaluation Program:

Please refer to the attached Drilling Program.

7. <u>Abnormal Conditions</u>:

Maximum anticipated bottomhole pressure calculated at 9,786' TVD, approximately equals 6,199 psi (calculated at 0.63 psi/foot).

Maximum anticipated surface pressure equals approximately 4,046 psi (bottomhole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot).

8. <u>Anticipated Starting Dates:</u>

Drilling is planned to commence immediately upon approval of this application.

9. <u>Variances:</u>

Please refer to the attached Drilling Program.

Onshore Order #2 – Air Drilling Variance

Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2

- Blowout Prevention Equipment (BOPE) requirements;
- Mud program requirements; and
- Special drilling operation (surface equipment placement) requirements associated with air drilling.

This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.

The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.

More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.

Background

In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

The air rig is then mobilized to drill the surface casing hole by drilling a 12-1/4 inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 12-1/4 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 9-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.

Variance for BOPE Requirements

The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.

Variance for Mud Material Requirements

Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.

Variance for Special Drilling Operation (surface equipment placement) Requirements

Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.

Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.

Conclusion

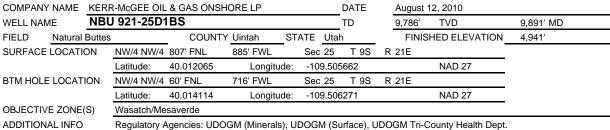
The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.

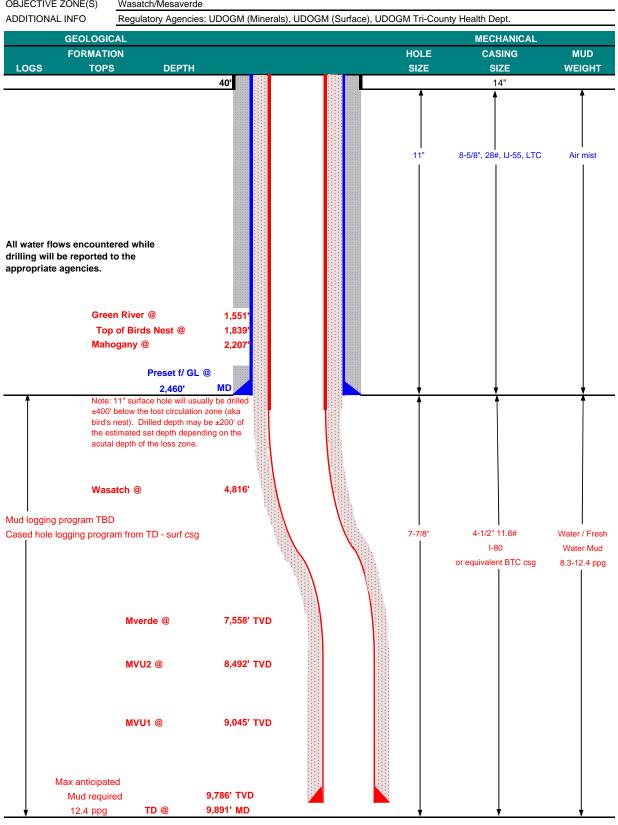
10. Other Information:

Please refer to the attached Drilling Program.



KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM







KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

CASING PROGRAM

									DESIGN FACTORS				
	SIZE	INTI	ERVAL		WT.	GR.	CPLG.	BURST	COLLAPSE	TENSION			
CONDUCTOR	14"	C	-40'										
								3,390	1,880	348,000			
SURFACE	8-5/8"	0	to	2,460	28.00	IJ-55	LTC	0.81	1.63	5.00			
								7,780	6,350	278,000			
PRODUCTION	4-1/2"	0	to	9,891	11.60	I-80	BTC	1.87	1.01	2.78			

*Burst on suface casing is controlled by fracture gradient as shoe with gas gradient above.

D.F. = 2.19

- 1) Max Anticipated Surf. Press.(MASP) (Surface Casing) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point))
- 2) MASP (Prod Casing) = Pore Pressure at TD (0.22 psi/ft-partial evac gradient x TD)

(Burst Assumptions: TD = 12.4 ppg) 0.22 psi/ft = gradient for partially evac wellbore (Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

MASP 4,046 psi

3) Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

(Burst Assumptions: TD = 12.4 ppg) 0.63 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

MABHP 6,199 psi

CEMENT PROGRAM

	FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE LEAD	500'	Premium cmt + 2% CaCl	180	60%	15.80	1.15
Option 1		+ 0.25 pps flocele				
TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	270	0%	15.80	1.15
		+ 2% CaCl + 0.25 pps flocele				
SURFACE		NOTE: If well will circulate water to sur	face, optio	n 2 will be ເ	utilized	
Option 2 LEAD	1,960'	65/35 Poz + 6% Gel + 10 pps gilsonite	180	35%	11.00	3.82
		+ 0.25 pps Flocele + 3% salt BWOW				
TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80	1.15
		+ 0.25 pps flocele				
TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION LEAD	4,311'	Premium Lite II +0.25 pps	310	10%	11.00	3.38
		celloflake + 5 pps gilsonite + 10% gel				
		+ 0.5% extender				
TAIL	5,580'	50/50 Poz/G + 10% salt + 2% gel	1,080	10%	14.30	1.31
		+ 0.1% R-3				

^{*}Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

FLOAT EQUIPMENT & CENTRALIZERS

SURFACE

Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe

PRODUCTION

Float shoe, 1 jt, float collar. No centralizers will be used.

ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

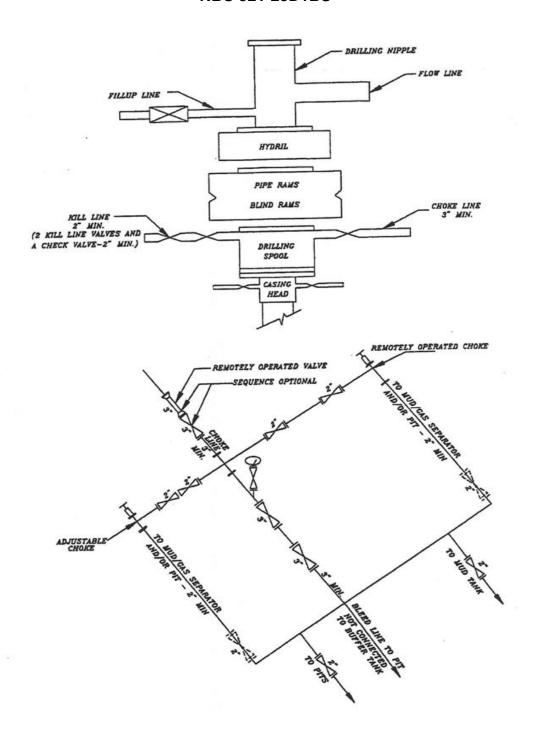
BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Surveys will be taken at 1,000' minimum intervals.
Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

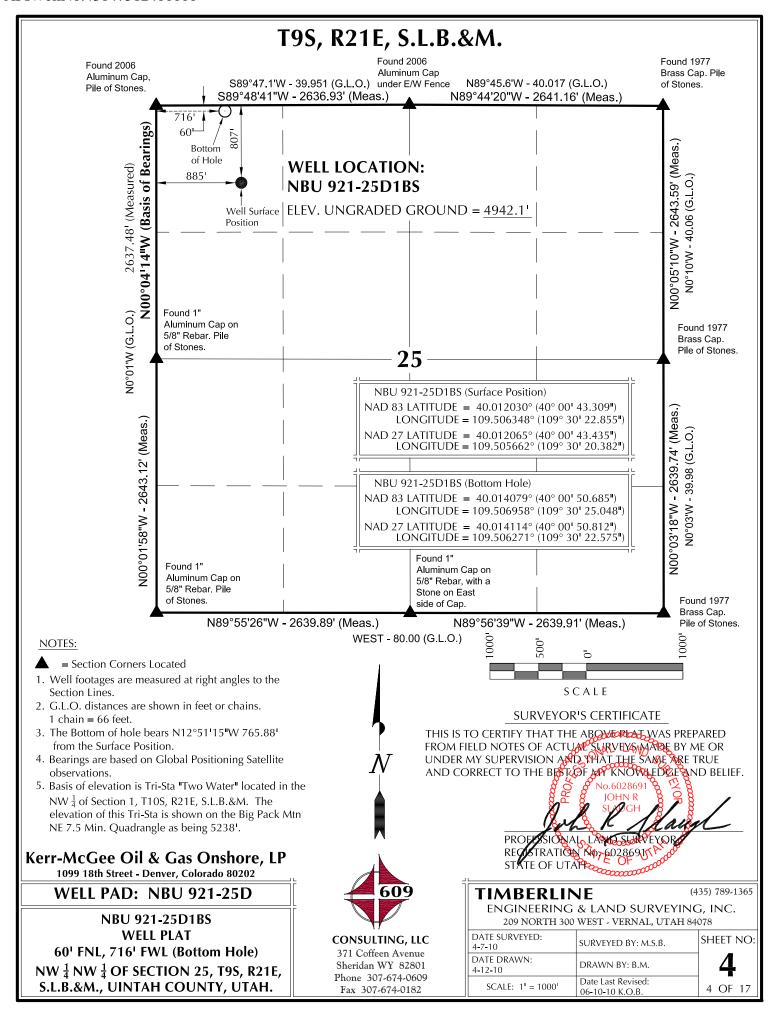
DRILLING ENGINEER:		DATE:	
	John Huycke / Emile Goodwin		
DRILLING SUPERINTENDENT:		DATE:	
	John Merkel / Lovel Young		Ī

^{*}Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

EXHIBIT A NBU 921-25D1BS



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK



WELL NAME	NAI		SURFACE POSIT	TION NAD27			BOTTOM HOLE NAD83 NAD27					1
	LATITUDE	LONGITUE	DE LATITUD		ITUDE	FOOTAGES	LATIT		LONGITUDE	LATITUDE	LONGITUDE	FOOTAGE
NBU 021-25E3AS	40°00'43.104" 40.011973°	109°30'23.13 109.506426°				828' FNL 864' FWL	40°00'2 40.0083		109°30'29.435" 109.508176°	40°00'30.031" 40.008342°	109°30'26.962" 109.507489°	2162' FN 371' FWI
IBU	40°00'43.172"	109°30'23.04	42" 40°00'43.29	98" 109°30'	20.569"	821' FNL	40°00'3	31.764"	109°30'22.038"	40°00'31.890"	109°30'19.566"	1976' FN
21-25E1CS BU	40.011992° 40°00'43.240"	109.506401° 109°30'22.94				871' FWL 814' FNL	40.0088 40°00'4		109.506122° 109°30'24.911"	40.008858° 40°00'46.860"	109.505435° 109°30'22.438"	947' FW 460' FNI
21-25D1CS	40.012011°	109.506374°	40.012046	109.505	5687°	878' FWL	40.0129	982°	109.506920°	40.013017°	109.506233°	726' FW
BU 21-25D1BS	40°00'43.309" 40.012030°					807' FNL 885' FWL	40°00'5 40.0140		109°30'25.048" 109.506958°	40°00'50.812" 40.014114°	109°30'22.575" 109.506271°	60' FNL 716' FW
BU	40°00'43.377"	109.506348° 109°30'22.76		04" 109.30°	20.288"	800' FNL	40°00'4		109.306938 109°30'03.344"		109.306271 109°30'00.872"	
21-25C1AS BU	40.012049° 40°00'43.023"	109.506323°				893 FWL 836 FNL	40.0137	740°	109.500929°	40.013775°	109.500242°	2405' FW
во 21-25D	40.011951°	109°30'23.24 109.506457°				855' FWL						
			RELATI	/E COORDI	NATES -	From Surface		to Botto	om Hole			
VELL NAME	NORTH		WELL NAME	NORTH	EAST		NAME	NOR	TH EAST	WELL NAM	E NORTH	EAST
BU 21-25E3AS	-1335.7'	4910	NBU 921-25E1CS	-1154.7'	77.6	NBU 921-25	D1CS	353.	7' -152.6'	NBU 921-25D1B	s 746.7'	-170.4
ELL NAME	NORTH	EAST	<u></u>		•	1/			· ·			
BU 21-25C1AS	615.31	1511.5'		_		/					•	
	<u> </u>					\ Z						
				\		Az=34//V 765.8 N12°51'15/V 765.8 (To Bottom Hole)				1		\
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	Gee Oil &			<i>5</i>	720°17'05' (TOB)		0.2	<u> </u>				
1099 1		nver, Colora	do 80202	<i>5</i>	720°17'05' (TOB)		0.2	TI	MBERL	INE	(4	
1099 1	8th Street - De LPAD - N	nver, Colora NBU 921	do 80202 1-25D	<i>5</i>	7.20°11'05' (7.011'05')	Az=17.	0.2	11	NGINEERIN	IG & LAND	SURVEYING	G, INC.
WELL	8th Street - De L PAD - N PAD INTE	nver, Colorad NBU 921 RFERENC	do 80202 1-25D CE PLAT		700717057	Az=17.	0.2	E	NGINEERIN 209 NORTH		SURVEYING	G, INC.
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WELL WELLS - N NBU 92	8th Street - De L PAD - N PAD INTE BU 921-25E 21-25D1CS,	nver, Colorad NBU 921 RFERENC 3AS, NBU NBU 921- 1-25C1AS	do 80202 I-25D CE PLAT 921-25E1CS 25D1BS &		CONSU 371 Co Sherida	609 JLTING, LLC	\$03°55 (To	DATE 4-7-1	NGINEERIN 209 NORTH: E SURVEYED: 0 E DRAWN:	IG & LAND 300 West - Ver	SURVEYINC NAL, UTAH 840 Y: M.S.B. B.M.	G, INC.

TOTAL WELL PAD AREA = 3.76 ACRES TOTAL DAMAGE AREA = 6.38 ACRES SHRINKAGE FACTOR = 1.10

Kerr-McGee Oil & Gas Onshore, LP 1099 18th Street - Denver, Colorado 80202

SWELL FACTOR = 1.00

WELL PAD - NBU 921-25D

WELL PAD - LOCATION LAYOUT NBU 921-25E3AS, NBU 921-25E1CS, NBU 921-25D1CS, NBU 921-25D1BS & NBU 921-25C1AS LOCATED IN SECTION 25, T9S, R21E, S.L.B.&M., UINTAH COUNTY, UTAH



CONSULTING, LLC 371 Coffeen Avenue Sheridan, WY 82801 Phone 307-674-0609 Fax 307-674-0182

EXCESS MATERIAL = 4,810 C.Y.

RESERVE PIT QUANTITIES

TOTAL CUT FOR RESERVE PIT +/- 9,300 CY RESERVE PIT CAPACITY (2' OF FREEBOARD) +/- 35,480 BARRELS

TIMBERLINE ENGINEERING & LAND SURVEYING, INC. 209 NORTH 300 WEST - VERNAL, UTAH 84078

- EPL - EXISTING PIPELINE

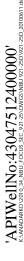


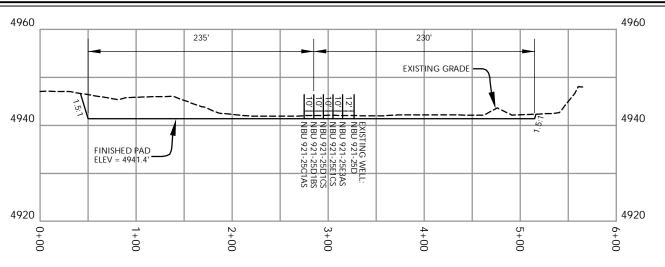
HORIZONTAL 0 1" = 60' 2' CONTOURS

Scale: 1"=60' Date: DJD REVISED: 7/7/10

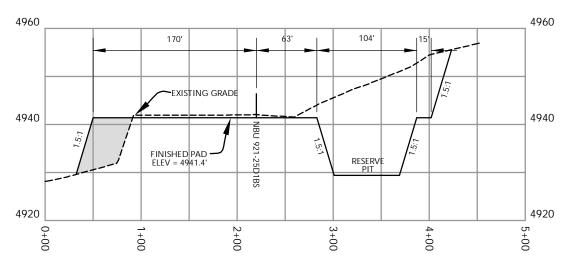
5/12/10 | SHEET NO:

7 OF 17





CROSS SECTION A-A'



CROSS SECTION B-B'

Kerr-McGee Oil & Gas Onshore, LP

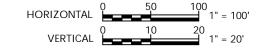
1099 18th Street - Denver, Colorado 80202

WELL PAD - NBU 921-25D

WELL PAD - CROSS SECTIONS NBU 921-25E3AS, NBU 921-25E1CS, NBU 921-25D1CS, NBU 921-25D1BS & NBU 921-25C1AS LOCATED IN SECTION 25, T9S, R21E, S.L.B.&M., UINTAH COUNTY, UTAH

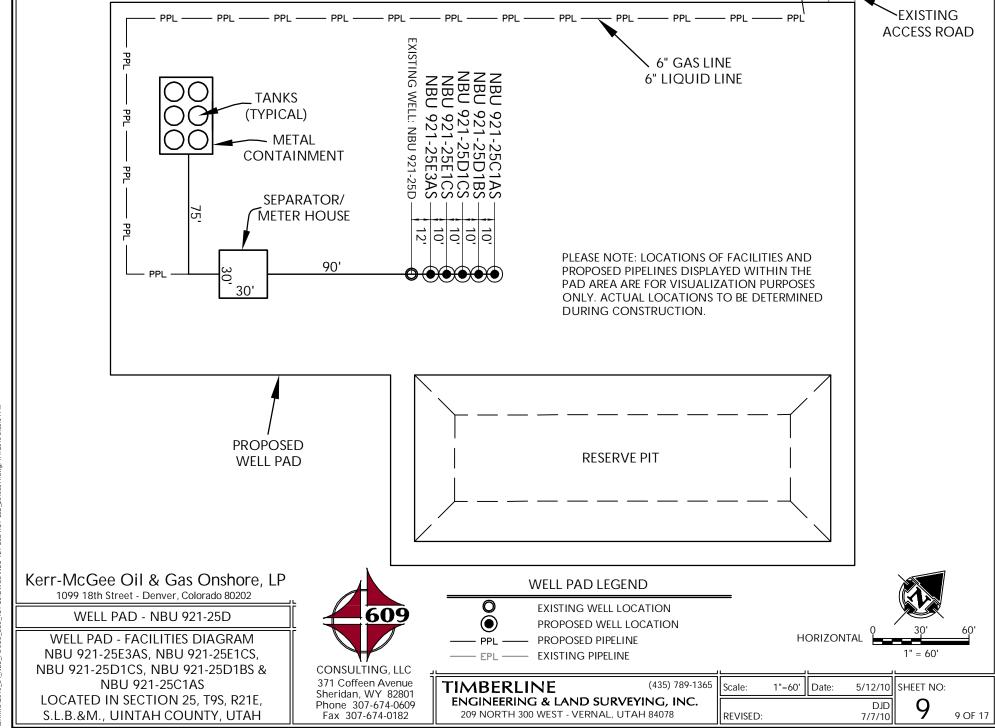






TIMBERLINE ENGINEERING & LAND SURVEYING, INC. 209 NORTH 300 WEST - VERNAL, UTAH 84078

5	Scale:	1"=100'	Date:	5/12/10	SHEET NO:	
	REVISED) :		DJD 7/7/10	8	8 OF 1



"APIWAEING-4304-4503-3EC 37.1-350408000","

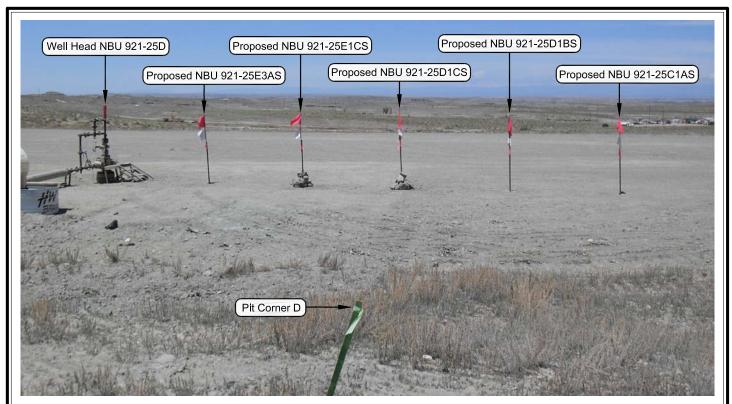


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE





PHOTO VIEW: FROM EXISTING ACCESS ROAD

CAMERA ANGLE: EASTERLY

Kerr-McGee Oil & Gas Onshore, LP 1099 18th Street - Denver, Colorado 80202

WELL PAD - NBU 921-25D

LOCATION PHOTOS

NBU 921-25E3AS, NBU 921-25E1CS,

NBU 921-25D1CS, NBU 921-25D1BS &

NBU 921-25C1AS

LOCATED IN SECTION 25, T9S, R21E,

S.L.B.&M., UINTAH COUNTY, UTAH.



CONSULTING, LLC 371 Coffeen Avenue

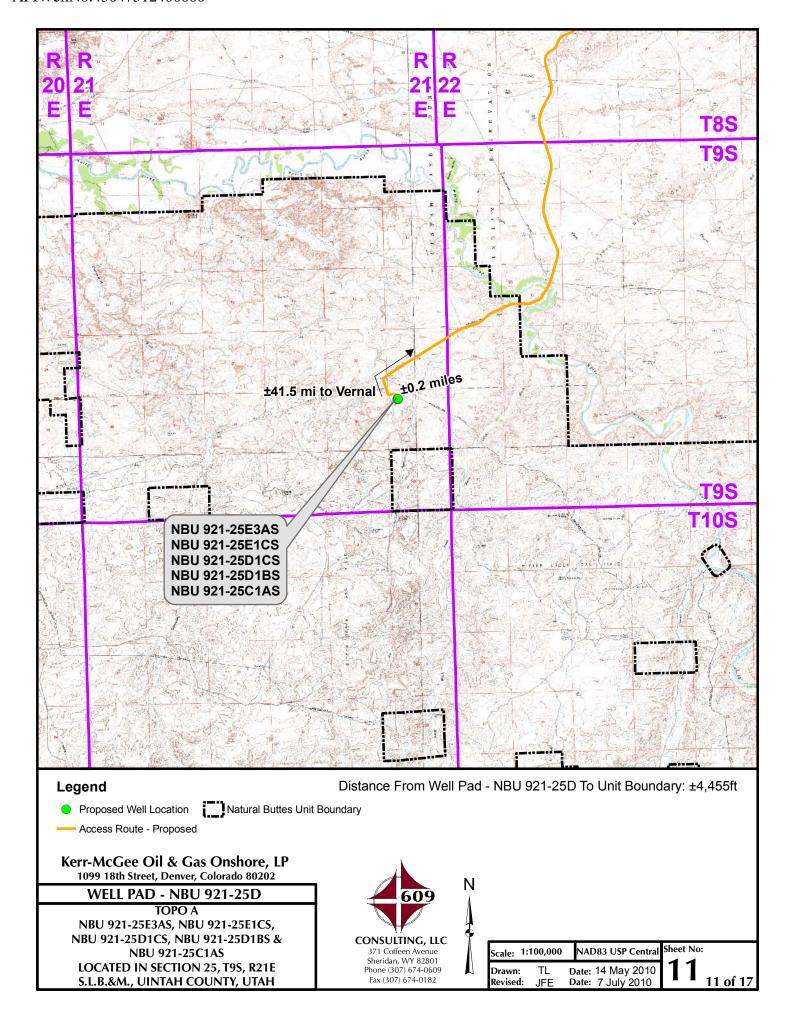
371 Coffeen Avenue Sheridan WY 82801 Phone 307-674-0609 Fax 307-674-0182

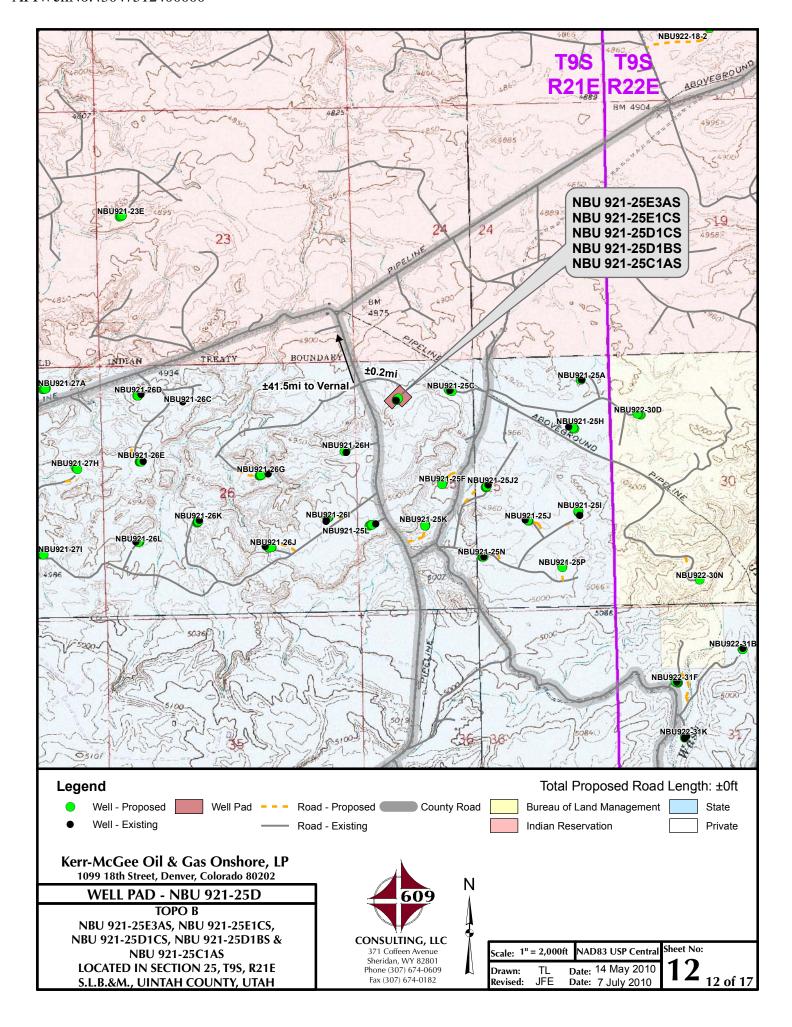
TIMBERLINE

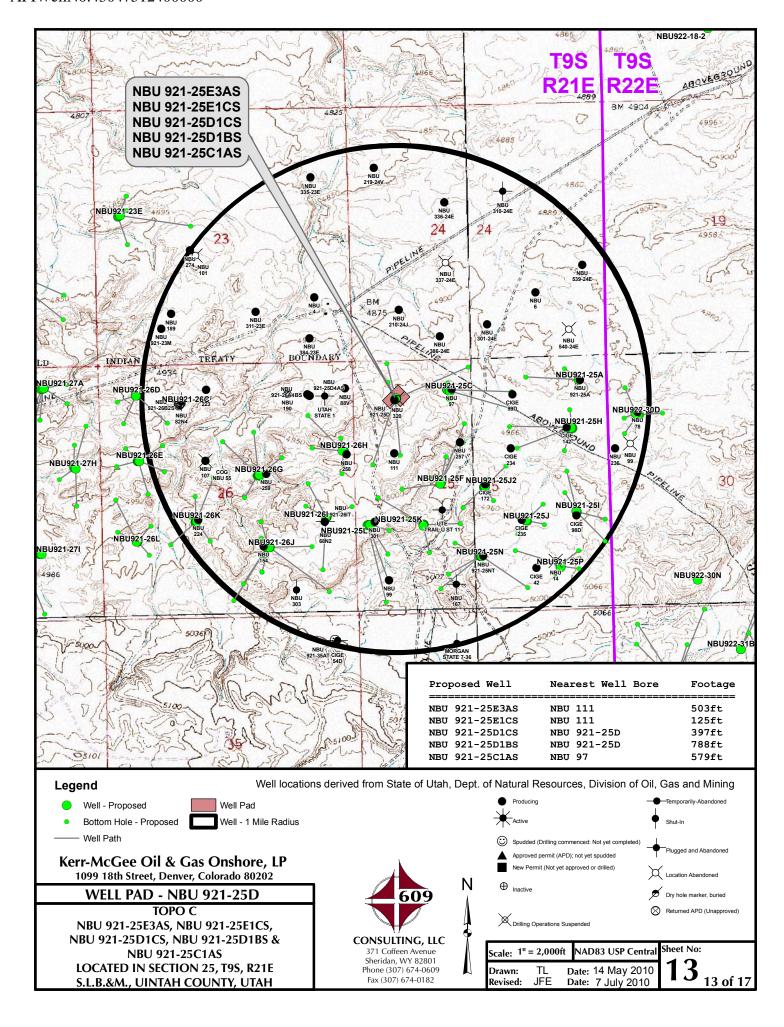
(435) 789-1365

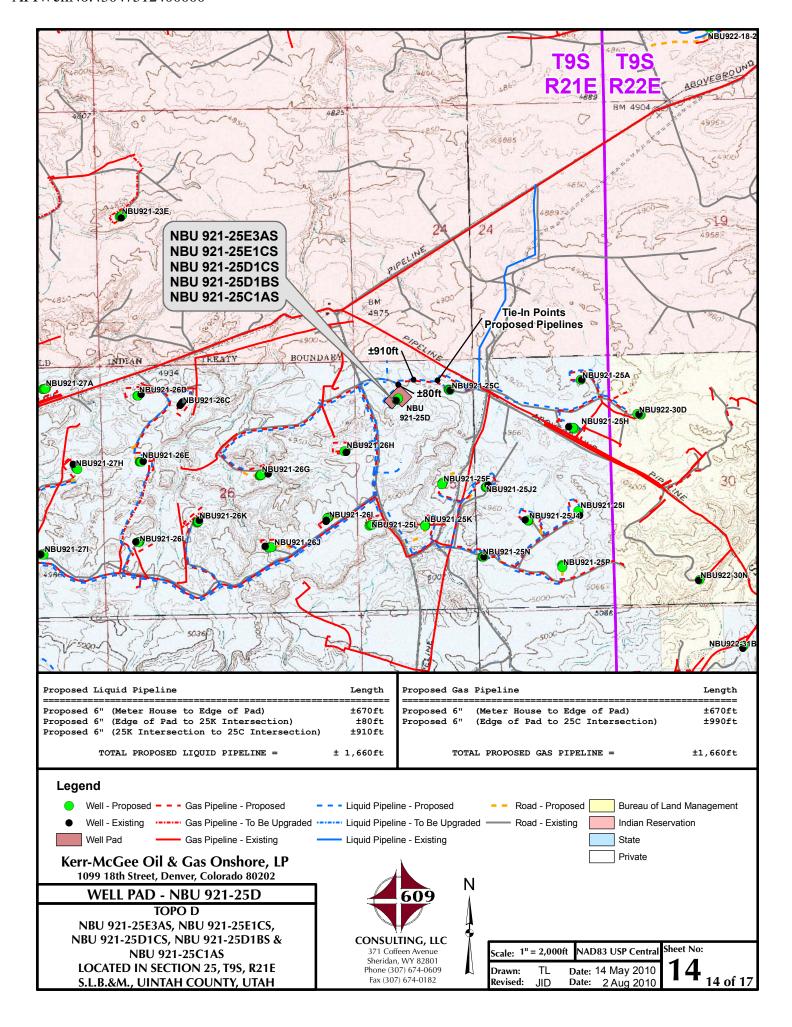
ENGINEERING & LAND SURVEYING, INC. 209 NORTH 300 WEST - VERNAL, UTAH 84078

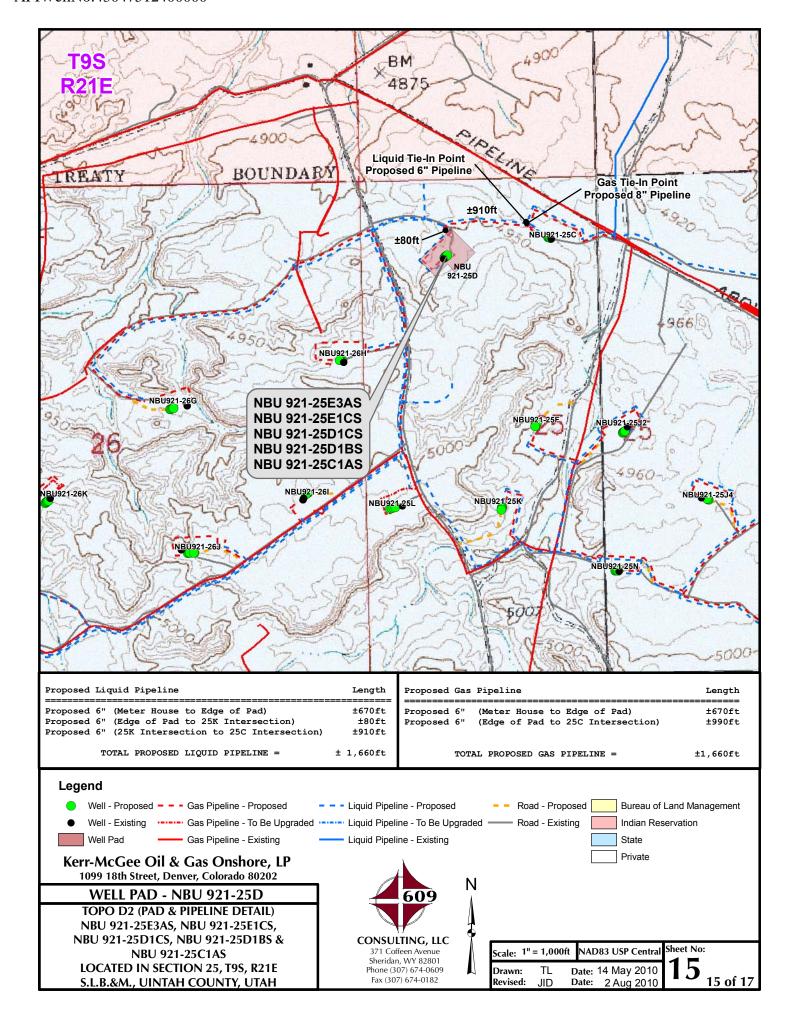
DATE PHOTOS TAKEN: 4-7-10	PHOTOS TAKEN BY: M.S.B.	SHEET NO:
DATE DRAWN: 4-12-10	DRAWN BY: K.O.B.	10
Date Last Revised: 06-10-1	0 K.O.B.	10 OF 17

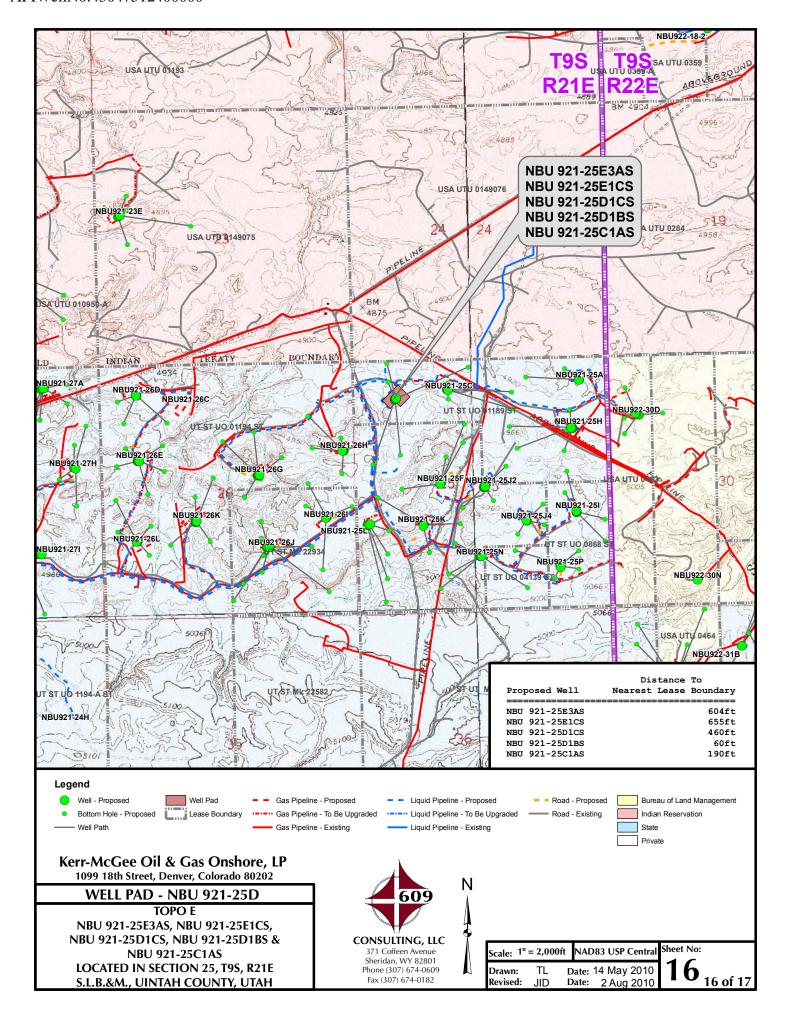












Kerr-McGee Oil & Gas Onshore, LP WELL PAD – NBU 921-25D WELLS – NBU 921-25E3AS, NBU 921-25E1CS, NBU 921-25D1CS, NBU 921-25D1BS & NBU 921-25C1AS Section 25, T9S, R21E, S.L.B.&M.

From the intersection of U.S. Highway 40 and 500 East Street in Vernal, Utah proceed in an easterly then southerly direction along U.S. Highway 40 approximately 3.3 miles to the junction of State Highway 45; exit right and proceed in a southerly direction along State Highway 45 approximately 20.2 miles to the junction of the Glen Bench Road (County B Road 3260). Exit right and proceed in a southwesterly direction along the Glen Bench Road approximately 18.0 miles to a service road to the east. Exit left and proceed in an easterly direction along service road approximately 0.2 miles to the proposed well location.

Total distance from Vernal, Utah to the proposed well location is approximately 41.7 miles in a southerly direction.

'APIWellNo:43047512400000' Project: Uintah County, UT UTM12 Site: NBU 921-25D Pad Well: NBU 921-25D1BS Scientific Drilling Wellbore: OH Rocky Mountain Operations Design: Plan #1 Kerr McGee Oil and Gas Onshore LP WELL DETAILS: NBU 921-25D1BS Azimuths to True North Magnetic North: 11.19° GL 4941' & RKB 14' @ 4955.00ft (ASSUMED) +N/-S +F/-W Magnetic Field Northing Easting Longitude 0.00 2058853.10 40° 0' 43.434 N 109° 30' 20.383 W 0.00 14533946.43 Strength: 52422.5snT -600 Dip Angle: 65.90° Date: 07/29/2010 Model: IGRF2010 WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG) 0 300 +N/-S +E/-W TVD Northing Easting Latitude Longitude Shape Start Build 2.00 -170.5514534689.73 2058670.05 40° 0' 50.810 Nt09° 30' 22.576 W Circle (Radius: 25.0 PBHL 9786.00 746.26 600 Start 1504.93 hold at 1200.00 MD 1185 1000 1200 NBU 921-25D1BS PBHL **GREEN RIVER** 750 1800 South(-)/North(+) (500 ft/in) 8 5/8 500 2400 2617 5/8 250 Start 6157.72 hold at 3733.50 MD 3628 True Vertical Depth (1200 ft/in) -250-500 -500 -250 250 500 750 0 1000 1250 1500 WASATCH West(-)/East(+) (500 ft/in) SECTION DETAILS TVD +N/-S +E/-W Sec MD Inc DLeg **TFace** VSec Target 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 300.00 300.00 1185.27 2 300.00 3 1200.00 0.00 0.00 347.13 0.00 0.00 0.00 0.00 0.00 140.21 6000 136.69 -31.24 18.00 2.00 347.13 0.00 4 2704.93 18.00 347.13 590.05 -134.85 0.00 605.26 2616.54 5 3733.50 746.26 -170.55 765.51 0.00 0.00 3628.28 1.75 180.00 6 9891.22 9786.00 746.26 -170.55 0.00 0.00 765.51 NBU 921-25D1BS PBHL 6600 PROJECT DETAILS: Uintah County, UT UTM12 FORMATION TOP DETAILS Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 - Western US 7200 TVDPath MDPath Ellipsoid: Clarke 1866 1551.00 1584.55 **GREEN RIVER** Zone: Zone 12N (114 W to 108 W) 4816.00 4921.22 WASATCH Location: SEC 25 T9S R21E 8492.00 8597.22 MESAVERDE System Datum: Mean Sea Level 7800 Local North: No north reference data is available 8400 MESAVERDE 9000 TD at 9891.22 9600 9786 Plan: Plan #1 (NBU 921-25D1BS/OH) 1800 2400 600 1200 Created By: Robert H. Scott Date: 22:08, July 29 2010 Vertical Section at 347.13° (1200 ft/in)



Kerr McGee Oil and Gas Onshore LP

Uintah County, UT UTM12 NBU 921-25D Pad NBU 921-25D1BS OH

Plan: Plan #1

Standard Planning Report

29 July, 2010







EDM 2003.16 Single User Db Database:

Company: Kerr McGee Oil and Gas Onshore LP Project: Uintah County, UT UTM12

Site: NBU 921-25D Pad Well: NBU 921-25D1BS

Wellbore: OH Plan #1 Design:

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Well NBU 921-25D1BS

GL 4941' & RKB 14' @ 4955.00ft (ASSUMED) GL 4941' & RKB 14' @ 4955.00ft (ASSUMED)

Minimum Curvature

Uintah County, UT UTM12 Project

Map System: Universal Transverse Mercator (US Survey Fee System Datum: Mean Sea Level

NAD 1927 - Western US Geo Datum: Map Zone: Zone 12N (114 W to 108 W)

Site NBU 921-25D Pad, SEC 25 T9S R21E

14,533,953.48ft Northing: 40° 0' 43.502 N Site Position: Latitude: 109° 30' 20.290 W From: Lat/Long Easting: 2,058,860.26ft Longitude:

Position Uncertainty: 0.00 ft 0.96° Slot Radius: in Grid Convergence:

Well NBU 921-25D1BS, 807' FNL 885' FWL

Well Position +N/-S 0.00 ft Northing: 14,533,946.43 ft Latitude: 40° 0' 43.434 N +E/-W 0.00 ft 2,058,853.10 ft 109° 30' 20.383 W Easting: Longitude:

0.00 ft ft **Position Uncertainty** Wellhead Elevation: **Ground Level:** 4,941.00 ft

Wellbore OH **Magnetics Model Name** Sample Date Declination Dip Angle Field Strength (nT) (°) (°)

IGRF2010 07/29/2010 11.19 65.90 52,423 Design Plan #1

Audit Notes:

PLAN 0.00 Version: Tie On Depth: Phase:

Vertical Section: +N/-S +E/-W Direction Depth From (TVD) (ft) (ft) (ft) (°) 0.00 0.00 0.00 347.13

Plan Sections Measured Vertical Dogleg **Build** Turn Depth Inclination Depth +N/-S Rate **Azimuth** +F/-W Rate Rate **TFO** (°/100ft) (°/100ft) (ft) (°) (ft) (ft) (ft) (°/100ft) **Target** (°) (°) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 300.00 0.00 0.00 300.00 0.00 0.00 0.00 0.00 0.00 0.00 1,200.00 18.00 347.13 1,185.27 136.69 -31.24 2.00 2.00 0.00 347.13 2,704.93 18.00 347.13 2,616.54 590.05 -134.85 0.00 0.00 0.00 0.00 3,628.28 3,733.50 0.00 746.26 -170.55 1.75 -1.75 0.00 180.00 0.00 0.00 -170.55 0.00 0.00 0.00 0.00 NBU 921-25D1BS I 9.891.22 0.00 9,786.00 746.26





Database: Company: EDM 2003.16 Single User Db

Kerr McGee Oil and Gas Onshore LP

Project: Uintah County, UT UTM12
Site: NBU 921-25D Pad
Well: NBU 921-25D1BS

Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference:

TVD Reference: MD Reference:

North Reference: Survey Calculation Method: Well NBU 921-25D1BS

GL 4941' & RKB 14' @ 4955.00ft (ASSUMED) GL 4941' & RKB 14' @ 4955.00ft (ASSUMED)

True

Design	n: Pi	an #1								
Planne	ed Survey									
	Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
	0.00 100.00 200.00 300.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 100.00 200.00 300.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00
	Start Build	1 2.00 2.00	347.13	399.98	1.70	-0.39	1.75	2.00	2.00	0.00
	500.00 600.00 700.00 800.00 900.00	4.00 6.00 8.00 10.00 12.00	347.13 347.13 347.13 347.13 347.13	499.84 599.45 698.70 797.47 895.62	6.80 15.30 27.18 42.43 61.03	-1.55 -3.50 -6.21 -9.70 -13.95	6.98 15.69 27.88 43.52 62.60	2.00 2.00 2.00 2.00 2.00 2.00	2.00 2.00 2.00 2.00 2.00 2.00	0.00 0.00 0.00 0.00 0.00
	1,000.00 1,100.00 1,200.00	14.00 16.00 18.00 .93 hold at 120	347.13 347.13 347.13	993.06 1,089.64 1,185.27	82.96 108.19 136.69	-18.96 -24.73 -31.24	85.10 110.98 140.21	2.00 2.00 2.00	2.00 2.00 2.00	0.00 0.00 0.00
	1,300.00 1,400.00	18.00 18.00	347.13 347.13	1,280.37 1,375.48	166.81 196.94	-38.12 -45.01	171.11 202.02	0.00 0.00	0.00 0.00	0.00 0.00
	1,500.00 1,584.55	18.00 18.00	347.13 347.13	1,470.59 1,551.00	227.06 252.53	-51.89 -57.72	232.92 259.05	0.00 0.00	0.00 0.00	0.00 0.00
	1.600.00	VER 18.00	347.13	1,565.69	257.19	-58.78	263.82	0.00	0.00	0.00
	1,700.00 1,800.00	18.00 18.00	347.13 347.13	1,660.80 1,755.90	287.31 317.44	-65.66 -72.55	294.72 325.62	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00
	1,900.00 2,000.00 2,100.00 2,200.00 2,300.00	18.00 18.00 18.00 18.00 18.00	347.13 347.13 347.13 347.13 347.13	1,851.01 1,946.11 2,041.22 2,136.32 2,231.43	347.56 377.69 407.81 437.94 468.06	-79.43 -86.32 -93.20 -100.09 -106.97	356.52 387.43 418.33 449.23 480.13	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
	2,400.00 2,500.00 2,540.33	18.00 18.00 18.00	347.13 347.13 347.13	2,326.54 2,421.64 2,460.00	498.19 528.31 540.46	-113.86 -120.74 -123.52	511.03 541.93 554.40	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00
	8 5/8" 2,600.00 2,700.00	18.00 18.00	347.13 347.13	2,516.75 2,611.85	558.44 588.56	-127.63 -134.51	572.84 603.74	0.00 0.00	0.00 0.00	0.00 0.00
	2,704.93	18.00	347.13	2,616.54	590.05	-134.85	605.26	0.00	0.00	0.00
	Start Drop 2,800.00 2,900.00 3,000.00 3,100.00	16.34 14.59 12.84 11.09	347.13 347.13 347.13 347.13	2,707.37 2,803.75 2,900.90 2,998.72	617.40 643.39 666.50 686.70	-141.10 -147.04 -152.32 -156.94	633.32 659.98 683.68 704.41	1.75 1.75 1.75 1.75	-1.75 -1.75 -1.75 -1.75	0.00 0.00 0.00 0.00
	3,200.00 3,300.00 3,400.00 3,500.00 3,600.00	9.34 7.59 5.84 4.09 2.34	347.13 347.13 347.13 347.13	3,097.13 3,196.04 3,295.35 3,394.97 3,494.81	703.98 718.33 729.72 738.15 743.61	-160.89 -164.17 -166.77 -168.70 -169.95	722.13 736.85 748.53 757.18 762.78	1.75 1.75 1.75 1.75 1.75	-1.75 -1.75 -1.75 -1.75 -1.75	0.00 0.00 0.00 0.00 0.00
	3,700.00 3,733.50	0.59 0.00	347.13 0.00	3,594.78 3,628.28	746.10 746.26	-170.52 -170.55	765.33 765.51	1.75 1.75	-1.75 -1.75	0.00 0.00
		.72 hold at 373		2 604 70	746.06	170 <i>EF</i>	765 51	0.00	0.00	0.00
	3,800.00 3,900.00 4,000.00	0.00 0.00 0.00	0.00 0.00 0.00	3,694.78 3,794.78 3,894.78	746.26 746.26 746.26	-170.55 -170.55 -170.55	765.51 765.51 765.51	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00
	4,100.00 4,200.00	0.00 0.00	0.00 0.00	3,994.78 4,094.78	746.26 746.26	-170.55 -170.55	765.51 765.51	0.00 0.00	0.00 0.00	0.00 0.00





Database: Company: EDM 2003.16 Single User Db

Kerr McGee Oil and Gas Onshore LP

Project:

Uintah County, UT UTM12 NBU 921-25D Pad

Well: NBU 921-25D1BS

Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference:

TVD Reference: MD Reference:

North Reference: Survey Calculation Method: Well NBU 921-25D1BS

GL 4941' & RKB 14' @ 4955.00ft (ASSUMED) GL 4941' & RKB 14' @ 4955.00ft (ASSUMED)

True

ned Surve	y								
Measure Depth (ft)		Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,300			4,194.78	746.26	-170.55	765.51	0.00	0.00	0.00
4,400 4,500			4,294.78 4,394.78	746.26 746.26	-170.55 -170.55	765.51 765.51	0.00 0.00	0.00 0.00	0.00 0.00
4,600			4,494.78	746.26	-170.55	765.51	0.00	0.00	0.00
4,700 4,800			4,594.78 4,694.78	746.26 746.26	-170.55 -170.55	765.51 765.51	0.00 0.00	0.00 0.00	0.00 0.00
4,900			4,794.78	746.26	-170.55	765.51	0.00	0.00	0.00
4,921	.22 0.00		4,816.00	746.26	-170.55	765.51	0.00	0.00	0.00
WASA									
5,000 5,100			4,894.78 4,994.78	746.26 746.26	-170.55 -170.55	765.51 765.51	0.00 0.00	0.00 0.00	0.00 0.00
5,200			5,094.78	746.26	-170.55	765.51 765.51	0.00	0.00	0.00
5,300	.00 0.00	0.00	5,194.78	746.26	-170.55	765.51	0.00	0.00	0.00
5,400	.00 0.00	0.00	5,294.78	746.26	-170.55	765.51	0.00	0.00	0.00
5,500			5,394.78	746.26	-170.55	765.51	0.00	0.00	0.00
5,600 5,700			5,494.78 5,594.78	746.26 746.26	-170.55 -170.55	765.51 765.51	0.00 0.00	0.00 0.00	0.00 0.00
5,800			5,694.78	746.26	-170.55	765.51	0.00	0.00	0.00
5,900			5,794.78	746.26	-170.55	765.51	0.00	0.00	0.00
6,000			5,894.78	746.26	-170.55	765.51	0.00	0.00	0.00
6,100 6,200			5,994.78 6,094.78	746.26 746.26	-170.55 -170.55	765.51 765.51	0.00 0.00	0.00 0.00	0.00 0.00
6,300			6,194.78	746.26	-170.55	765.51 765.51	0.00	0.00	0.00
6,400			6,294.78	746.26	-170.55	765.51	0.00	0.00	0.00
6,500			6,394.78	746.26	-170.55	765.51	0.00	0.00	0.00
6,600 6,700			6,494.78 6,594.78	746.26 746.26	-170.55 -170.55	765.51 765.51	0.00 0.00	0.00 0.00	0.00 0.00
6,800			6,694.78	746.26	-170.55	765.51	0.00	0.00	0.00
6,900			6,794.78	746.26	-170.55	765.51	0.00	0.00	0.00
7,000			6,894.78	746.26	-170.55	765.51	0.00	0.00	0.00
7,100			6,994.78	746.26	-170.55	765.51	0.00	0.00	0.00
7,200 7,300			7,094.78 7,194.78	746.26 746.26	-170.55 -170.55	765.51 765.51	0.00 0.00	0.00 0.00	0.00 0.00
7,400			7,294.78	746.26	-170.55	765.51	0.00	0.00	0.00
7,500			7,394.78	746.26	-170.55	765.51	0.00	0.00	0.00
7,600			7,494.78	746.26	-170.55	765.51	0.00	0.00	0.00
7,700 7,800			7,594.78 7,694.78	746.26 746.26	-170.55 -170.55	765.51 765.51	0.00 0.00	0.00 0.00	0.00 0.00
7,900			7,794.78	746.26	-170.55	765.51	0.00	0.00	0.00
8,000			7,894.78	746.26	-170.55	765.51	0.00	0.00	0.00
8,100			7,994.78	746.26	-170.55	765.51	0.00	0.00	0.00
8,200 8,300			8,094.78 8,194.78	746.26 746.26	-170.55 -170.55	765.51 765.51	0.00 0.00	0.00 0.00	0.00 0.00
8,400			8,294.78	746.26	-170.55	765.51	0.00	0.00	0.00
8,500	.00 0.00	0.00	8,394.78	746.26	-170.55	765.51	0.00	0.00	0.00
8,597	.22 0.00		8,492.00	746.26	-170.55	765.51	0.00	0.00	0.00
MESA \ 8,600	/ERDE .00 0.00	0.00	8,494.78	746.26	-170.55	765.51	0.00	0.00	0.00
8,700			8,594.78	746.26	-170.55	765.51	0.00	0.00	0.00
8,800	.00 0.00	0.00	8,694.78	746.26	-170.55	765.51	0.00	0.00	0.00
8,900			8,794.78	746.26	-170.55	765.51	0.00	0.00	0.00
9,000	.00		8,894.78 8,994.78	746.26 746.26	-170.55 -170.55	765.51 765.51	0.00 0.00	0.00 0.00	0.00 0.00



Kerr McGee Oil and Gas Onshore LP

Uintah County, UT UTM12 NBU 921-25D Pad NBU 921-25D1BS OH

Plan: Plan #1

Standard Planning Report - Geographic

29 July, 2010





TVD Reference:

Local Co-ordinate Reference:



EDM 2003.16 Single User Db Database:

Company: Kerr McGee Oil and Gas Onshore LP Project: Uintah County, UT UTM12

Site: Well: Wellbore: OH

Design:

Design

MD Reference: NBU 921-25D Pad North Reference: NBU 921-25D1BS **Survey Calculation Method:** Well NBU 921-25D1BS

GL 4941' & RKB 14' @ 4955.00ft (ASSUMED) GL 4941' & RKB 14' @ 4955.00ft (ASSUMED)

Minimum Curvature

Project Uintah County, UT UTM12

Plan #1

Map System: Universal Transverse Mercator (US Survey Fee System Datum: Mean Sea Level

NAD 1927 - Western US Geo Datum: Map Zone: Zone 12N (114 W to 108 W)

Site NBU 921-25D Pad, SEC 25 T9S R21E

14,533,953.48ft Site Position: Northing: Latitude: 40° 0' 43.502 N Lat/Long 109° 30' 20.290 W From: Easting: 2,058,860.26ft Longitude:

Position Uncertainty: 0.00 ft Slot Radius: **Grid Convergence:** 0.96°

Well NBU 921-25D1BS, 807' FNL 885' FWL

Plan #1

Well Position +N/-S 0.00 ft Northing: 14,533,946.43 ft Latitude: 40° 0' 43.434 N +E/-W 0.00 ft Easting: 2,058,853.10 ft Longitude: 109° 30' 20.383 W **Position Uncertainty** 0.00 ft Wellhead Elevation: ft **Ground Level:** 4,941.00 ft

Wellbore ОН **Magnetics Model Name** Sample Date Declination **Dip Angle** Field Strength (°) (°) (nT)

IGRF2010 65.90 52,423 07/29/2010 11.19

Audit Notes:

0.00 Version: Phase: **PLAN** Tie On Depth:

Vertical Section: Depth From (TVD) +N/-S +E/-W Direction (ft) (ft) (ft) (°) 0.00 0.00 0.00 347.13

Plan Sections Vertical Build Measured Turn Dogleg Depth Inclination **Azimuth** Depth +N/-S +E/-W Rate Rate Rate **TFO** (ft) (°) (ft) (ft) (ft) (°/100ft) (°/100ft) (°/100ft) (°) (°) **Target** 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 300.00 0.00 0.00 300.00 0.00 0.00 0.00 0.00 0.00 0.00 347.13 18.00 347.13 1,185.27 136.69 -31.24 2.00 2.00 0.00 1,200.00 2,704.93 18.00 347.13 2,616.54 590.05 -134.85 0.00 0.00 0.00 0.00 3,733.50 0.00 0.00 3,628.28 746.26 -170.55 1.75 -1.75 0.00 180.00 9,891.22 0.00 746.26 0.00 0.00 0.00 0.00 NBU 921-25D1BS I 0.00 9,786.00 -170.55





Database: Company: EDM 2003.16 Single User Db

Kerr McGee Oil and Gas Onshore LP

Project: Uintah County, UT UTM12
Site: NBU 921-25D Pad
Well: NBU 921-25D1BS

Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference:

TVD Reference: MD Reference:

North Reference: Survey Calculation Method: Well NBU 921-25D1BS

GL 4941' & RKB 14' @ 4955.00ft (ASSUMED) GL 4941' & RKB 14' @ 4955.00ft (ASSUMED)

True

Design.									
Planned Sur	vey								
Measured Depth (ft)	•	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
0.0	0.00	0.00	0.00	0.00	0.00	14,533,946.43	2,058,853.10	40° 0' 43.434 N	109° 30' 20.383 W
100.0		0.00	100.00	0.00	0.00	14,533,946.43	2,058,853.10	40° 0' 43.434 N	109° 30' 20.383 W
200.0		0.00	200.00	0.00	0.00	14,533,946.43	2,058,853.10	40° 0' 43.434 N	109° 30' 20.383 W
300.0		0.00	300.00	0.00	0.00	14,533,946.43	2,058,853.10	40° 0' 43.434 N	109° 30' 20.383 W
	Build 2.00	0.47.40	000.00	4.70	0.00	4.4.500.040.40	0.050.050.00	400 OL 40 454 N	4000 001 00 000 111
400.0		347.13	399.98	1.70	-0.39	14,533,948.13	2,058,852.68	40° 0' 43.451 N	109° 30' 20.388 W
500.0 600.0		347.13 347.13	499.84 599.45	6.80 15.30	-1.55 -3.50	14,533,953.21 14,533,961.67	2,058,851.43	40° 0' 43.501 N 40° 0' 43.585 N	109° 30' 20.403 W 109° 30' 20.428 W
700.0		347.13	698.70	27.18	-3.30 -6.21	14,533,961.67	2,058,849.34 2,058,846.43	40° 0′ 43.703 N	109° 30′ 20.428 W
800.0		347.13	797.47	42.43	-9.70	14,533,988.69	2,058,842.69	40° 0' 43.853 N	109° 30' 20.508 W
900.0		347.13	895.62	61.03	-13.95	14,534,007.22	2,058,838.13	40° 0' 44.037 N	109° 30' 20.562 W
1,000.0		347.13	993.06	82.96	-18.96	14,534,029.06	2,058,832.75	40° 0' 44.254 N	109° 30' 20.627 W
1,100.0		347.13	1,089.64	108.19	-24.73	14,534,054.19	2,058,826.56	40° 0' 44.503 N	109° 30' 20.701 W
1,200.0	0 18.00	347.13	1,185.27	136.69	-31.24	14,534,082.58	2,058,819.57	40° 0' 44.785 N	109° 30' 20.785 W
Start	1504.93 hold	at 1200.00 I	MD						
1,300.0		347.13	1,280.37	166.81	-38.12	14,534,112.58	2,058,812.18	40° 0' 45.083 N	109° 30' 20.873 W
1,400.0		347.13	1,375.48	196.94	-45.01	14,534,142.59	2,058,804.79	40° 0' 45.381 N	109° 30' 20.962 W
1,500.0		347.13	1,470.59	227.06	-51.89	14,534,172.60	2,058,797.40	40° 0' 45.678 N	109° 30' 21.050 W
1,584.5		347.13	1,551.00	252.53	-57.72	14,534,197.97	2,058,791.15	40° 0' 45.930 N	109° 30' 21.125 W
	N RIVER	0.47.40	4 505 00	057.40	F0 70	44 504 000 00	0.050.700.04	400 01 45 070 11	4000 001 04 400 144
1,600.0		347.13	1,565.69	257.19	-58.78	14,534,202.60	2,058,790.01	40° 0' 45.976 N	109° 30' 21.139 W
1,700.0		347.13	1,660.80	287.31	-65.66	14,534,232.61	2,058,782.62	40° 0' 46.274 N	109° 30' 21.227 W
1,800.0 1,900.0		347.13 347.13	1,755.90 1,851.01	317.44 347.56	-72.55 -79.43	14,534,262.61 14,534,292.62	2,058,775.23 2,058,767.84	40° 0' 46.572 N 40° 0' 46.869 N	109° 30' 21.316 W 109° 30' 21.404 W
2,000.0		347.13	1,946.11	377.69	-79.43 -86.32	14,534,322.62	2,058,760.46	40° 0' 47.167 N	109° 30′ 21.404 W
2,100.0		347.13	2,041.22	407.81	-93.20	14,534,352.63	2,058,753.07	40° 0' 47.167 N	109° 30′ 21.581 W
2,200.0		347.13	2,136.32	437.94	-100.09	14,534,382.63	2,058,745.68	40° 0' 47.763 N	109° 30' 21.670 W
2,300.0		347.13	2,231.43	468.06	-106.97	14,534,412.64	2,058,738.29	40° 0' 48.061 N	109° 30' 21.758 W
2,400.0		347.13	2,326.54	498.19	-113.86	14,534,442.64	2,058,730.90	40° 0' 48.358 N	109° 30' 21.847 W
2,500.0	0 18.00	347.13	2,421.64	528.31	-120.74	14,534,472.65	2,058,723.51	40° 0' 48.656 N	109° 30' 21.935 W
2,540.3	3 18.00	347.13	2,460.00	540.46	-123.52	14,534,484.75	2,058,720.53	40° 0' 48.776 N	109° 30' 21.971 W
8 5/8"									
2,600.0		347.13	2,516.75	558.44	-127.63	14,534,502.65	2,058,716.12	40° 0' 48.954 N	109° 30' 22.024 W
2,700.0		347.13	2,611.85	588.56	-134.51	14,534,532.66	2,058,708.73	40° 0' 49.252 N	109° 30' 22.112 W
2,704.9		347.13	2,616.54	590.05	-134.85	14,534,534.14	2,058,708.37	40° 0' 49.266 N	109° 30' 22.117 W
	Drop -1.75	0.47.40	0.707.07	0.17.40	444.40	44 504 504 00	0.050.704.00	400 01 40 507 11	4000 001 00 407 144
2,800.0		347.13	2,707.37	617.40	-141.10	14,534,561.38	2,058,701.66	40° 0' 49.537 N	109° 30' 22.197 W
2,900.0		347.13	2,803.75	643.39	-147.04	14,534,587.27	2,058,695.28 2,058,689.62	40° 0' 49.794 N 40° 0' 50.022 N	109° 30' 22.273 W
3,000.0 3,100.0		347.13 347.13	2,900.90 2,998.72	666.50 686.70	-152.32 -156.94	14,534,610.28 14,534,630.41	2,058,684.66	40° 0' 50.022 N	109° 30' 22.341 W 109° 30' 22.401 W
3,200.0		347.13	3,097.13	703.98	-160.89	14,534,647.62	2,058,680.42	40° 0' 50.392 N	109° 30′ 22.451 W
3,300.0		347.13	3,196.04	718.33	-164.17	14,534,661.91	2,058,676.90	40° 0' 50.534 N	109° 30' 22.494 W
3,400.0		347.13	3,295.35	729.72	-166.77	14,534,673.25	2,058,674.11	40° 0' 50.647 N	109° 30' 22.527 W
3,500.0		347.13	3,394.97	738.15	-168.70	14,534,681.65	2,058,672.04	40° 0' 50.730 N	109° 30' 22.552 W
3,600.0		347.13	3,494.81	743.61	-169.95	14,534,687.09	2,058,670.70	40° 0' 50.784 N	109° 30' 22.568 W
3,700.0		347.13	3,594.78	746.10	-170.52	14,534,689.56	2,058,670.09	40° 0' 50.809 N	109° 30' 22.575 W
3,733.5		0.00	3,628.28	746.26	-170.55	14,534,689.73	2,058,670.05	40° 0' 50.810 N	109° 30' 22.576 W
Start	6157.72 hold	at 3733.50 I							
3,800.0		0.00	3,694.78	746.26	-170.55	14,534,689.73	2,058,670.05	40° 0' 50.810 N	109° 30' 22.576 W
3,900.0			3,794.78	746.26	-170.55	14,534,689.73	2,058,670.05	40° 0′ 50.810 N	109° 30' 22.576 W
4,000.0			3,894.78	746.26	-170.55	14,534,689.73	2,058,670.05	40° 0' 50.810 N	109° 30' 22.576 W
4,100.0		0.00	3,994.78	746.26	-170.55	14,534,689.73	2,058,670.05	40° 0' 50.810 N	109° 30' 22.576 W
4,200.0	0.00	0.00	4,094.78	746.26	-170.55	14,534,689.73	2,058,670.05	40° 0' 50.810 N	109° 30' 22.576 W





Database: Company: EDM 2003.16 Single User Db

Kerr McGee Oil and Gas Onshore LP

Project: Uint Site: NBU

Uintah County, UT UTM12 NBU 921-25D Pad

Well: NBU 921-25D1BS Wellbore: OH

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Well NBU 921-25D1BS

GL 4941' & RKB 14' @ 4955.00ft (ASSUMED) GL 4941' & RKB 14' @ 4955.00ft (ASSUMED)

True

Design:	Plan #1								
Planned Surv	rey								
Measured Depth	Inclination		Vertical Depth	+N/-S	+E/-W	Map Northing	Map Easting		
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)	Latitude	Longitude
4,300.00		0.00	4,194.78	746.26	-170.55	14,534,689.73	2,058,670.05	40° 0' 50.810 N	109° 30' 22.576 W
4,400.00 4,500.00		0.00 0.00	4,294.78 4,394.78	746.26 746.26	-170.55 -170.55	14,534,689.73 14,534,689.73	2,058,670.05 2,058,670.05	40° 0' 50.810 N 40° 0' 50.810 N	109° 30' 22.576 W 109° 30' 22.576 W
4,600.00		0.00	4,494.78	746.26	-170.55	14,534,689.73	2,058,670.05	40° 0' 50.810 N	109° 30′ 22.576 W
4,700.00		0.00	4,594.78	746.26	-170.55	14,534,689.73	2,058,670.05	40° 0' 50.810 N	109° 30' 22.576 W
4,800.00		0.00	4,694.78	746.26	-170.55	14,534,689.73	2,058,670.05	40° 0' 50.810 N	109° 30' 22.576 W
4,900.00	0.00	0.00	4,794.78	746.26	-170.55	14,534,689.73	2,058,670.05	40° 0' 50.810 N	109° 30' 22.576 W
4,921.22	0.00	0.00	4,816.00	746.26	-170.55	14,534,689.73	2,058,670.05	40° 0' 50.810 N	109° 30' 22.576 W
WASAT									
5,000.00		0.00	4,894.78	746.26	-170.55	14,534,689.73	2,058,670.05	40° 0' 50.810 N	109° 30' 22.576 W
5,100.00 5,200.00		0.00 0.00	4,994.78 5,094.78	746.26 746.26	-170.55 -170.55	14,534,689.73 14,534,689.73	2,058,670.05 2,058,670.05	40° 0' 50.810 N 40° 0' 50.810 N	109° 30' 22.576 W 109° 30' 22.576 W
5,300.00		0.00	5,094.78	746.26	-170.55	14,534,689.73	2,058,670.05	40° 0' 50.810 N	109° 30′ 22.576 W
5,400.00		0.00	5,294.78	746.26	-170.55	14,534,689.73	2,058,670.05	40° 0' 50.810 N	109° 30' 22.576 W
5,500.00		0.00	5,394.78	746.26	-170.55	14,534,689.73	2,058,670.05	40° 0' 50.810 N	109° 30' 22.576 W
5,600.00		0.00	5,494.78	746.26	-170.55	14,534,689.73	2,058,670.05	40° 0' 50.810 N	109° 30' 22.576 W
5,700.00		0.00	5,594.78	746.26	-170.55	14,534,689.73	2,058,670.05	40° 0' 50.810 N	109° 30' 22.576 W
5,800.00		0.00	5,694.78	746.26	-170.55	14,534,689.73	2,058,670.05	40° 0' 50.810 N	109° 30' 22.576 W
5,900.00		0.00	5,794.78	746.26	-170.55	14,534,689.73	2,058,670.05	40° 0' 50.810 N	109° 30' 22.576 W
6,000.00 6,100.00		0.00 0.00	5,894.78 5,994.78	746.26 746.26	-170.55 -170.55	14,534,689.73 14,534,689.73	2,058,670.05 2,058,670.05	40° 0' 50.810 N 40° 0' 50.810 N	109° 30' 22.576 W 109° 30' 22.576 W
6,200.00		0.00	6,094.78	746.26	-170.55	14,534,689.73	2,058,670.05	40° 0' 50.810 N	109° 30′ 22.576 W
6,300.00		0.00	6,194.78	746.26	-170.55	14,534,689.73	2,058,670.05	40° 0' 50.810 N	109° 30' 22.576 W
6,400.00		0.00	6,294.78	746.26	-170.55	14,534,689.73	2,058,670.05	40° 0' 50.810 N	109° 30' 22.576 W
6,500.00	0.00	0.00	6,394.78	746.26	-170.55	14,534,689.73	2,058,670.05	40° 0' 50.810 N	109° 30' 22.576 W
6,600.00		0.00	6,494.78	746.26	-170.55	14,534,689.73	2,058,670.05	40° 0' 50.810 N	109° 30' 22.576 W
6,700.00		0.00	6,594.78	746.26	-170.55	14,534,689.73	2,058,670.05	40° 0' 50.810 N	109° 30' 22.576 W
6,800.00		0.00	6,694.78	746.26	-170.55	14,534,689.73	2,058,670.05	40° 0' 50.810 N	109° 30' 22.576 W
6,900.00 7,000.00		0.00 0.00	6,794.78 6,894.78	746.26 746.26	-170.55 -170.55	14,534,689.73 14,534,689.73	2,058,670.05 2,058,670.05	40° 0' 50.810 N 40° 0' 50.810 N	109° 30' 22.576 W 109° 30' 22.576 W
7,100.00		0.00	6,994.78	746.26	-170.55	14,534,689.73	2,058,670.05	40° 0' 50.810 N	109° 30' 22.576 W
7,200.00		0.00	7,094.78	746.26	-170.55	14,534,689.73	2,058,670.05	40° 0' 50.810 N	109° 30' 22.576 W
7,300.00		0.00	7,194.78	746.26	-170.55	14,534,689.73	2,058,670.05	40° 0' 50.810 N	109° 30' 22.576 W
7,400.00		0.00	7,294.78	746.26	-170.55	14,534,689.73	2,058,670.05	40° 0' 50.810 N	109° 30' 22.576 W
7,500.00		0.00	7,394.78	746.26	-170.55	14,534,689.73	2,058,670.05	40° 0' 50.810 N	109° 30' 22.576 W
7,600.00		0.00	7,494.78	746.26	-170.55	14,534,689.73	2,058,670.05	40° 0' 50.810 N	109° 30' 22.576 W
7,700.00 7,800.00		0.00 0.00	7,594.78 7,694.78	746.26 746.26	-170.55 -170.55	14,534,689.73 14,534,689.73	2,058,670.05 2,058,670.05	40° 0' 50.810 N 40° 0' 50.810 N	109° 30' 22.576 W 109° 30' 22.576 W
7,800.00		0.00	7,094.78	746.26 746.26	-170.55 -170.55	14,534,689.73	2,058,670.05	40° 0' 50.810 N	109° 30' 22.576 W
8,000.00		0.00	7,794.78	746.26	-170.55	14,534,689.73	2,058,670.05	40° 0' 50.810 N	109° 30' 22.576 W
8,100.00		0.00	7,994.78	746.26	-170.55	14,534,689.73	2,058,670.05	40° 0' 50.810 N	109° 30' 22.576 W
8,200.00		0.00	8,094.78	746.26	-170.55	14,534,689.73	2,058,670.05	40° 0' 50.810 N	109° 30' 22.576 W
8,300.00		0.00	8,194.78	746.26	-170.55	14,534,689.73	2,058,670.05	40° 0' 50.810 N	109° 30' 22.576 W
8,400.00		0.00	8,294.78	746.26	-170.55	14,534,689.73	2,058,670.05	40° 0' 50.810 N	109° 30' 22.576 W
8,500.00		0.00	8,394.78	746.26	-170.55	14,534,689.73	2,058,670.05	40° 0' 50.810 N	109° 30' 22.576 W
8,597.22		0.00	8,492.00	746.26	-170.55	14,534,689.73	2,058,670.05	40° 0' 50.810 N	109° 30' 22.576 W
MESAV 8,600.00		0.00	8,494.78	746.26	-170.55	14,534,689.73	2,058,670.05	40° 0' 50.810 N	109° 30' 22.576 W
8,700.00		0.00	8,594.78	746.26	-170.55	14,534,689.73	2,058,670.05	40° 0' 50.810 N	109° 30′ 22.576 W
8,800.00		0.00	8,694.78	746.26	-170.55	14,534,689.73	2,058,670.05	40° 0' 50.810 N	109° 30' 22.576 W
8,900.00		0.00	8,794.78	746.26	-170.55	14,534,689.73	2,058,670.05	40° 0' 50.810 N	109° 30' 22.576 W
9,000.00		0.00	8,894.78	746.26	-170.55	14,534,689.73	2,058,670.05	40° 0' 50.810 N	109° 30' 22.576 W
9,100.00		0.00	8,994.78	746.26	-170.55	14,534,689.73	2,058,670.05	40° 0' 50.810 N	109° 30' 22.576 W
9,200.00	0.00	0.00	9,094.78	746.26	-170.55	14,534,689.73	2,058,670.05	40° 0' 50.810 N	109° 30' 22.576 W





Database: Company: EDM 2003.16 Single User Db

Kerr McGee Oil and Gas Onshore LP Uintah County, UT UTM12

Project: NBU 921-25D Pad Site: Well: NBU 921-25D1BS

Wellbore: OH Plan #1 Design:

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Well NBU 921-25D1BS

GL 4941' & RKB 14' @ 4955.00ft (ASSUMED) GL 4941' & RKB 14' @ 4955.00ft (ASSUMED)

Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
0.00	0.00	9,194.78	746.26	-170.55	14,534,689.73	2,058,670.05	40° 0' 50.810 N	109° 30' 22.576 W
0.00	0.00	9,294.78	746.26	-170.55	14,534,689.73	2,058,670.05	40° 0' 50.810 N	109° 30' 22.576 W
0.00	0.00	9,394.78	746.26	-170.55	14,534,689.73	2,058,670.05	40° 0' 50.810 N	109° 30' 22.576 W
0.00	0.00	9,494.78	746.26	-170.55	14,534,689.73	2,058,670.05	40° 0' 50.810 N	109° 30' 22.576 W
0.00	0.00	9,594.78	746.26	-170.55	14,534,689.73	2,058,670.05	40° 0' 50.810 N	109° 30' 22.576 W
0.00	0.00	9,694.78	746.26	-170.55	14,534,689.73	2,058,670.05	40° 0' 50.810 N	109° 30' 22.576 V
0.00	0.00	9.786.00	746.26	-170.55	14,534,689.73	2,058,670.05	40° 0' 50.810 N	109° 30' 22.576 V
	0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00	Inclination (°) Azimuth (°) Depth (ft) 0.00 0.00 9,194.78 0.00 0.00 9,294.78 0.00 0.00 9,394.78 0.00 0.00 9,494.78 0.00 0.00 9,594.78 0.00 0.00 9,694.78	Inclination (°) Azimuth (°) Depth (ft) +N/-S (ft) 0.00 0.00 9,194.78 746.26 0.00 0.00 9,294.78 746.26 0.00 0.00 9,394.78 746.26 0.00 0.00 9,494.78 746.26 0.00 0.00 9,594.78 746.26 0.00 0.00 9,594.78 746.26 0.00 0.00 9,694.78 746.26	Inclination (°) Azimuth (°) Depth (ft) +N/-S (ft) +E/-W (ft) 0.00 0.00 9,194.78 746.26 -170.55 0.00 0.00 9,294.78 746.26 -170.55 0.00 0.00 9,394.78 746.26 -170.55 0.00 0.00 9,494.78 746.26 -170.55 0.00 0.00 9,594.78 746.26 -170.55 0.00 0.00 9,694.78 746.26 -170.55 0.00 0.00 9,694.78 746.26 -170.55	Inclination (°) Azimuth (°) Depth (ft) +N/-S (ft) +E/-W (ft) Northing (ft) 0.00 0.00 9,194.78 746.26 -170.55 14,534,689.73 0.00 0.00 9,294.78 746.26 -170.55 14,534,689.73 0.00 0.00 9,394.78 746.26 -170.55 14,534,689.73 0.00 0.00 9,494.78 746.26 -170.55 14,534,689.73 0.00 0.00 9,594.78 746.26 -170.55 14,534,689.73 0.00 0.00 9,694.78 746.26 -170.55 14,534,689.73 0.00 0.00 9,694.78 746.26 -170.55 14,534,689.73	Inclination (°) Azimuth (°) Depth (ft) +N/-S (ft) +E/-W (ft) Northing (ft) Easting (ft) 0.00 0.00 9,194.78 746.26 -170.55 14,534,689.73 2,058,670.05 0.00 0.00 9,294.78 746.26 -170.55 14,534,689.73 2,058,670.05 0.00 0.00 9,394.78 746.26 -170.55 14,534,689.73 2,058,670.05 0.00 0.00 9,494.78 746.26 -170.55 14,534,689.73 2,058,670.05 0.00 0.00 9,594.78 746.26 -170.55 14,534,689.73 2,058,670.05 0.00 0.00 9,694.78 746.26 -170.55 14,534,689.73 2,058,670.05 0.00 0.00 9,694.78 746.26 -170.55 14,534,689.73 2,058,670.05	Inclination (°) Azimuth (°) Depth (ft) +N/-S (ft) +E/-W (ft) Northing (ft) Easting (ft) Latitude 0.00 0.00 9,194.78 746.26 -170.55 14,534,689.73 2,058,670.05 40° 0' 50.810 N 0.00 0.00 9,294.78 746.26 -170.55 14,534,689.73 2,058,670.05 40° 0' 50.810 N 0.00 0.00 9,394.78 746.26 -170.55 14,534,689.73 2,058,670.05 40° 0' 50.810 N 0.00 0.00 9,494.78 746.26 -170.55 14,534,689.73 2,058,670.05 40° 0' 50.810 N 0.00 0.00 9,594.78 746.26 -170.55 14,534,689.73 2,058,670.05 40° 0' 50.810 N 0.00 0.00 9,694.78 746.26 -170.55 14,534,689.73 2,058,670.05 40° 0' 50.810 N

Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
NBU 921-25D1BS Pl - plan hits target - Circle (radius 2	center	0.00	9,786.00	746.26	-170.55	14,534,689.73	2,058,670.05	40° 0' 50.810 N	109° 30' 22.576 W

- piaii iii	is lary	et center
 Circle 	(radius	25.00)

- Circle (radius 25.00	1)
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Casing Points						
	Measured	Vertical		Casing	Hole	
	Depth (ft)	Depth (ft)	Name	Diameter (in)	Diameter (in)	
	(14)	(11)	Name	(111)	()	
	2,540.33	2,460.00 8 5/8'		8.625	11.000	

Formations							
	Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
	1,584.55 4,921.22 8,597.22	4,816.00	GREEN RIVER WASATCH MESAVERDE				

Plan Annotations					
Mea	sured	Vertical	Local Coor	dinates	
	epth (ft)	Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment
		300.00	0.00	0.00	Start Build 2.00
	200.00	1,185.27	136.69	-31.24	Start 1504.93 hold at 1200.00 MD
,	704.93	2,616.54	590.05	-134.85	Start Drop -1.75
,	733.50	3,628.28	746.26	-170.55	Start 6157.72 hold at 3733.50 MD
9,8	891.22	9,786.00	746.26	-170.55	TD at 9891.22





Database: Company: EDM 2003.16 Single User Db

Kerr McGee Oil and Gas Onshore LP Uintah County, UT UTM12 Project:

NBU 921-25D Pad Site: Well: NBU 921-25D1BS

Wellbore: OH Plan #1 Design:

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Well NBU 921-25D1BS

GL 4941' & RKB 14' @ 4955.00ft (ASSUMED) GL 4941' & RKB 14' @ 4955.00ft (ASSUMED)

Minimum Curvature

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
9,200.00	0.00	0.00	9,094.78	746.26	-170.55	765.51	0.00	0.00	0.00
9,300.00	0.00	0.00	9,194.78	746.26	-170.55	765.51	0.00	0.00	0.00
9,400.00	0.00	0.00	9,294.78	746.26	-170.55	765.51	0.00	0.00	0.00
9,500.00	0.00	0.00	9,394.78	746.26	-170.55	765.51	0.00	0.00	0.00
9,600.00	0.00	0.00	9,494.78	746.26	-170.55	765.51	0.00	0.00	0.00
9,700.00	0.00	0.00	9,594.78	746.26	-170.55	765.51	0.00	0.00	0.00
9,800.00	0.00	0.00	9,694.78	746.26	-170.55	765.51	0.00	0.00	0.00
9.891.22	0.00	0.00	9.786.00	746.26	-170.55	765.51	0.00	0.00	0.00

Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
NBU 921-25D1BS P		0.00	9,786.00	746.26	-170.55	14,534,689.73	2,058,670.05	40° 0' 50.810 N	109° 30′ 22.576 W

- Circle (radius 25.00)

Casing Points							
	Measured Depth (ft)	Vertical Depth (ft)		Name	Casing Diameter (in)	Hole Diameter (in)	
	2,540.33	2,460.00	8 5/8"		8.625	11.000	

Formations							
	Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
	1,584.55	1,551.00	GREEN RIVER				
	4,921.22	4,816.00	WASATCH				
	8,597.22	8,492.00	MESAVERDE				

Plan Annotations						
Measu	ed Vertical	Local C	oordinates			
Depti (ft)	n Depth (ft)	+N/-S	+E/-W	Comment		
(it)	(11)	(ft)	(ft)	Comment		
300	.00 300.0	0.00	0.00	Start Build 2.00		
1,200	.00 1,185.2	27 136.69	-31.24	Start 1504.93 hold at 1200.00 MD		
2,704	.93 2,616.5	54 590.05	-134.85	Start Drop -1.75		
3,733	.50 3,628.2	28 746.26	-170.55	Start 6157.72 hold at 3733.50 MD		
9,891	.22 9,786.0	00 746.26	-170.55	TD at 9891.22		

NBU 921-25C1AS

Surface: 800' FNL 893' FWL (NW/4NW/4) BHL: 190' FNL 2,405' FWL (NE/4NW/4) Mineral Lease: UO 1189 ST

NBU 921-25D1BS

Surface: 807' FNL 885' FWL (NW/4NW/4) BHL: 60' FNL 716' FWL (NW/4NW/4) Mineral Lease: UO 1189 ST

NBU 921-25D1CS

Surface: 814' FNL 878' FWL (NW/4NW/4) BHL: 460' FNL 726' FWL (NW/4NW/4) Mineral Lease: UO 1189 ST

NBU 921-25E1CS

Surface: 821' FNL 871' FWL (NW/4NW/4) BHL: 1,976' FNL 947' FWL (SW/4NW/4) Mineral Lease: UO 1194 ST

NBU 921-25E3AS

Surface: 828' FNL 864' FWL (NW/4NW/4) BHL: 2,162' FNL 371' FWL (SW/4NW/4) Mineral Lease: UO 1194 ST

> Pad: NBU 921-25D Section 25 T9S R21E

Uintah County, Utah Operator: Kerr-McGee Oil & Gas Onshore LP

MULTI-POINT SURFACE USE PLAN of OPERATIONS (SUPO)

This SUPO contains surface operating procedures for Kerr-McGee Oil & Gas Onshore LP (KMG), a wholly owned subsidiary of Anadarko Petroleum Corporation (APC) pertaining to actions that involve the State of Utah School and Institutional Trust Lands Administration (SITLA) in the development of minerals leased to APC/KMG (including, but not limited to, APDs/SULAs/ROEs/ROWs and/or easements).

See associated Utah Division of Oil, Gas, and Mining (UDOGM) Form 3(s), plats, maps, and other attachments for site-specific information on projects represented herein.

In accordance with Utah Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling, these wells will be directionally drilled. Refer to Topo Map A for directions to the location and Topo Maps A and B for location of access roads within a 2-mile radius.

A. Existing Roads:

Existing roads consist of county roads and improved/unimproved lease roads. APC/KMG will maintain

NBU 921-25C1AS / 25D1BS/ 25D1CS/ 25E1CS/ 25E3AS

existing roads in a condition that is the same as or better than before operations began and in a safe and usable condition. Maintenance of existing roads will continue until final abandonment and reclamation of well pads and/or other facilities. The road maintenance may include, but is not limited to, blading, ditching, culvert installation/cleanout, surfacing, and dust control.

Typically, roads, gathering lines and electrical distribution lines will occupy common disturbance corridors and roadways will be used as working space. All disturbances located in the same corridor will overlap each other to the maximum extent possible; in no case will the maximum disturbance width of the access road and utility corridors exceed 50', unless otherwise approved.

B. Planned Access Roads:

No new access road to this pad location is proposed (see Topo Map B). Applicable Uintah County encroachment and/or pipeline crossing permits will be obtained prior to construction/development. No other pipelines will be crossed at this location.

Where roads are new or to be reconstructed, they will be located, designed, and maintained to meet the standards of SITLA and other commonly accepted Best Management Practices (BMPs). If a new road/corridor were to cross a water of the United States, KMG will adhere to the requirements of applicable Nationwide or Individual Permits of the Department of Army Corps of Engineers.

Turnouts; major cut and fills; culverts; bridges; gates; cattle guards; low water crossings; or modifications needed to existing infrastructure/facilities were determined at the on-site and, as applicable, are typically shown on attached Exhibits and Topo maps.

C. <u>Location of Existing and Proposed Facilities</u>:

This pad will expand the existing pad for the NBU 921-25D, which is a vertical producing well according to Utah Division of Oil, Gas and Mining (UDOGM) records as of August 12, 2010.

Production facilities (see Well Pad Design Summary and Facilities Diagram):

Production facilities will be installed on the disturbed portion of each well pad and may include bermed components (typically excluding dehy's and/or separators) that contain fluids (i.e. production tanks, produced liquids tanks). The berms will be constructed of compacted subsoil or corrugated metal, impervious, designed to hold 110% of the capacity of the largest tank, and be independent of the back cut. All permanent (on-site six months or longer) aboveground structures constructed or installed, including pumping units, will be painted a flat, non-reflective, earth-tone color chosen at the onsite in coordination with SITLA.

Production tanks will be constructed, maintained, and operated to prevent unauthorized surface or subsurface discharges of liquids and to prevent livestock or wildlife entry. The tanks are not to be used for disposal of liquids from additional sources without prior approval of UDOGM. Gathering facilities:

The following pipeline transmission facilities will apply if the well is productive (see Topo D):

The total gas gathering (steel line pipe with fusion bond epoxy coating) pipeline distances from the meter to the tie in point is $\pm 1,660$ ' and the individual segments are broken up as follows:

 ± 670 ' (0.1 miles) –New 6" buried gas pipeline from the meter to the edge of the pad. ± 990 ' (0.2 miles) –New 6" buried gas pipeline from the edge of pad to the NBU 921-25C pad intersection.

The total liquid gathering pipeline distance from the meter to the tie in point is $\pm 1,660$ ' and the individual segments are broken up as follows:

 ± 670 ' (0.1 miles) –New 6" buried liquid pipeline from the meter to the edge of the pad. ± 800 ' (0.2 miles) –New 6" buried liquid pipeline from the edge of pad to the NBU 921-25K pad intersection.

±910' (0.2 miles) –New 6" buried liquid pipeline from the NBU 921-25K pad intersection to the NBU 921-25C pad intersection.

The liquid gathering lines will be made of polyethylene or a composite polyethylene/steel or polyethylene/fiberglass that is not subject to internal or external pipe corrosion. The content of the produced fluids to be transferred by the liquid gathering system will be approximately 92% produced water and 8% condensate. Trunk line valve connections for the water gathering system will be below ground but accessible from the surface in order to prevent freezing during winter time.

The proposed pipelines will be buried and will include gas gathering and liquid gathering pipelines in the same trench. Where the pipeline is adjacent to the road or well pad, the road and/or well pad will be utilized for construction activities and staging. Kerr-McGee requests a permanent 30' right-of-way adjacent to the road for life-of-project for maintenance, repairs, and/or upgrades, no additional right-of-way will be needed beyond the 30'. Where the pipeline is not adjacent to the road or well pad, Kerr-McGee requests a temporary 45' construction right-of-way and 30' permanent right-of-way.

The proposed trench width for the pipeline would range from 18-48 inches and will be excavated to a depth of 48 to 60 inches of normal soil cover or 24 inches of cover in consolidated rock. During construction blasting may occur along the proposed right-of-way where trenching equipment cannot cut into the bedrock. Large debris and rocks removed from the earth during trenching and blasting that could not be returned to the trench would be distributed evenly and naturally in the project area. The proposed pipelines will be pressure tested pneumatically (depending on size) or with fluids (either fresh or produced). If fluids are used, there will be no discharge to the surface.

Pipeline signs will be installed along the right-of-way to indicate the pipeline proximity, ownership, and to provide emergency contact phone numbers. Above ground valves, T's, and/or cathodic protection will be installed at various locations for connection, corrosion prevention and/or for safety purposes.

D. <u>Location and Type of Water Supply:</u>

Water for drilling purposes will be obtained from one of the following sources:

- Dalbo Inc.'s underground well located in Ouray, Utah, Sec. 32 T4S R3E, Water User Claim number 43-8496, application number 53617.
- Price Water Pumping Inc. Green River and White River, various sources, Water Right Number 49-1659, application number: a35745.

Water will be hauled to location over the roads marked on Maps A and B.

No water well is to be drilled on this lease.

E. Source of Construction Materials:

Construction operations will typically be completed with native materials found on location. If needed, construction materials that must be imported to the site (mineral material aggregate, soils or materials suitable for fill/surfacing) will be obtained from a nearby permitted source and described in subsequent Sundry requests. No construction materials will be removed from State lands without prior approval from SITLA.

F. <u>Methods of Handling Waste Materials</u>:

Should the well be productive, produced water will be contained in a water tank and will be transported by pipeline and/or truck to an approved disposal sites facilities and/or Salt Water Disposal (SWD) injection well. Currently, those facilities are:

RNI in Sec. 5 T9S R22E

Ace Oilfield in Sec. 2 T6S R20E MC&MC in Sec. 12 T6S R19E

Pipeline Facility in Sec. 36 T9S R20E

Goat Pasture Evaporation Pond in SW/4 Sec. 16 T10S R22E

Bonanza Evaporation Pond in Sec. 2 T10S R23E

Ouray #1 SWD in Sec. 1 T9S R21E NBU 159 SWD in Sec. 35 T9S R21E CIGE 112D SWD in Sec. 19 T9S R21E CIGE 114 SWD in Sec. 34 T9S R21E NBU 921-34K SWD in Sec. 34 T9S R21E NBU 921-33F SWD in Sec. 33 T9S R21E

NBU 921-34L SWD in Sec. 34 T9S R21E

Drill cuttings and/or fluids will be contained in the reserve/frac pit. Cuttings will be buried in pit(s) upon closure. Unless otherwise approved, no oil or other oil-based drilling additives, chromium/metals-based, or saline muds will be used during drilling. Only fresh water (as specified above), biodegradable polymer soap, bentonite clay, and/or non-toxic additives will be used in the mud system.

Pits will be constructed to minimize the accumulation of surface runoff. Should fluid hydrocarbons be encountered during drilling, completions or well testing, product will either be contained in test tanks on the well site or evacuated by vacuum trucks and transported to an approved disposal/sales facility. Should petroleum hydrocarbons unexpectedly be released into a pit, they will be removed as soon as practical but in no case will they remain longer than 72 hours unless an alternate is approved by SITLA. Should timely removal prove infeasible, the pit will be netted with mesh no larger than 1 inch until such time as hydrocarbons can be removed. Hydrocarbon removal will also take place prior to the closure of the pit, unless authorization is provided for disposal via alternative pit closure methods (e.g. solidification).

The reserve and/or fracture stimulation pit will be lined with a synthetic material 20-mil or thicker, The liner will be installed over smooth fill subgrade that is free of pockets, loose rocks, or other materials (i.e. sand, sifted dirt, bentonite, straw, etc.) that could damage the liner. Any additional pits necessary to subsequent operations, such as temporary flare or workover pits, will be contained within the originally approved well pad and disturbance boundaries. Such temporary pits will be backfilled and reclaimed within 180 days of completion of work at a well location.

For the protection of livestock and wildlife, all open pits and cellars will be fenced/covered to prevent wildlife or livestock entry. Total height of pit fencing will be at least 42 inches and corner posts will be cemented and/or braced in such a manner as to keep the fence tight at all times. Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet.

Pits containing drilling cuttings, mud, and/or completions fluids will be allowed to dry. Any free fluids remaining after six (6) months from reaching total depth, date of completion, and/or determination of inactivity will be removed (as weather conditions allow) to an approved site and the pit reclaimed. Additional drying methods may include fly-ash solidification or sprinkler evaporation. Installation and operation of any sprinklers, pumps, and equipment will ensure that water spray or mist does not drift. Reserve pit liners will be cut off or folded as near to the mud surface as possible and as safety considerations allow and buried on location.

No garbage or non-exempt substances as defined by Resource Conservation and Recovery Act (RCRA) subtitle C will be placed in the reserve pit. All refuse generated during construction, drilling, completion, and well testing activities will be contained in an enclosed receptacle, removed from the drill locations promptly, and transported to an approved disposal facility.

Portable, self-contained chemical toilets and/or sewage processing facilities will be provided for human waste disposal. Upon completion of operations, or as required, the toilet holding tanks will be pumped and the contents disposed of in an approved sewage disposal facility. All applicable regulations pertaining to disposal of human and solid waste will be observed.

Any undesirable event, accidental release, or in excess of reportable quantities will be managed according to the notification requirements of UDOGMs "Reporting Oil and Gas Undesirable Events" rule, and, where State wells are participatory to a Federal agreement, according to NTL-3A.

Materials Management

Hazardous materials above reportable quantities will not be produced by drilling or completing proposed wells or constructing the pipelines/facilities. The term "hazardous materials" as used here means: (1) any substance, pollutant, or containment listed as hazardous under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended 42 U.S.C. 9601 et seq., and the regulations issued under CERCLA; and (2) any hazardous waste as defined in RCRA of 1976, as amended. In addition, no extremely hazardous substance, as defined in 40 CFR 355, in threshold planning quantities, would be used, produced, stored, transported, or disposed of while producing any well.

Chemicals subject to reporting under Title III of the Superfund Amendments and Reauthorization Act (SARA) in quantities of 10,000 pounds or more may be produced and/or stored at production facilities and may be kept in limited quantities on drilling sites and well locations for short periods of time during drilling or completion activities.

G. Ancillary Facilities:

None are anticipated.

H. Well Site Layout (see Well Pad Design Summary):

The location, orientation and aerial extent of each drill pad; reserve/completion/flare pit; access road ingress/egress points, drilling rig, dikes/ditches, existing wells/infrastructure; proposed cuts and fills; and topsoil and spoil material stockpile locations are depicted on the exhibits for each project, where applicable. Site-specific conditions may require slight deviation in actual equipment and facility layout; however, the area of disturbance, as described in the survey, will not be exceeded.

Coordinates are provided in the National Spatial Reference System, North American Datum, 1983 (NAD83) or latest edition. Distances are depicted on each plat to the nearest two adjacent section lines.

I. Plans for Reclamation of the Surface:

Surface reclamation will be undertaken in two phases: interim and final. Interim reclamation is conducted following well completion and extends through the period of production. This reclamation is for the area of the well pad that is not required for production activities. Final reclamation is conducted following well plugging/conversion and/or facility abandonment processes.

Reclamation activities in both phases may include but are not limited to: re-contouring or re-configuration of topographic surfaces, restoration of drainage systems, segregation of spoils materials, minimizing surface disturbance, re-evaluating backfill requirements, pit closure, topsoil redistribution, soil treatments, seeding and weed control.

Interim Reclamation

Interim reclamation includes pit closure, re-contouring (where possible), soil bed preparation, topsoil placement, seeding, and/or weed control.

Interim re-contouring involves bringing all construction material from cuts and fills back onto the well pad and site and reestablishing the natural contours where desirable and practical. Fill and stockpiled spoils no longer necessary to the operation will be spread on the cut slopes and covered with stockpiled topsoil. All stockpiled top soils will be used for interim reclamation where practical to maintain soil viability. Where possible, the land surface will be left "rough" after re-contouring to ensure that the maximum surface area will be available to support the reestablishment of vegetative cover.

A reserve pit, upon being allowed to dry, will be backfilled and compacted with cover materials that are void of any topsoil, vegetation, large stones, rocks or foreign objects. Soils that are moisture laden, saturated, or partially/completely frozen will not be used for backfill or cover. The pit area will be mounded to allow for settling and to promote positive surface drainage away from the pit.

Final Reclamation

Final reclamation will be performed for newly drilled unproductive wells and/or at the end of the life of a productive well. As soon as practical after the conclusion of drilling and testing operations, unproductive drill holes will be plugged and abandoned (P&A). Site and road reclamation will commence following plugging. In no case will reclamation at non-producing locations be initiated later than six (6) months from the date a well is plugged. A joint inspection of the disturbed area to be reclaimed may be requested by APC/KMG. The primary purpose of this inspection will be to review the existing conditions, or agree upon a revised final reclamation and abandonment plan. A Notice of Intent to Abandon will be filed for final recommendations regarding surface reclamation.

After plugging, all wellhead equipment that is no longer needed will be removed, and the well site will be reclaimed. Final contouring will blend with and follow as closely as practical the natural terrain and contours of the original site and surrounding areas. After re-contouring, final grading will be conducted over the entire surface of the well site and access road. Where practical, the area will be ripped to a depth of 18 to 24 inches on 18 to 24-inch centers and surface materials will be pitted with small depressions to form longitudinal depressions 12 to 18 inches deep perpendicular to the natural flow of water.

All unnecessary surface equipment and structures (e.g. cattle guards) and water control structures (e.g. culverts, drainage pipes) not needed to facilitate successful reclamation will be removed during final reclamation. Roads that will be reclaimed will be ripped to a depth of 18 inches where practical, re-contoured to approximate the original contour of the ground and seeded.

Upon successfully completing reclamation of a P&A location, a Final Abandonment Notice will be submitted to UDOGM.

Seeding and Measures Common to Interim and Final Reclamation

Reclaimed areas may be fenced to exclude grazing and encourage re-vegetation.

On slopes where severe erosion can become a problem and the use of machinery is not practical, seed will be hand broadcast and raked with twice the specified amount of seed. The slope will be stabilized using materials specifically designed to prevent erosion on steep slopes and hold seed in place so vegetation can become permanently established. These materials will include, but are not limited to, erosion control blankets and bonded fiber matrix at a rate to achieve a minimum of 80 percent soil coverage.

Seeding will occur year-round as conditions allow. Seed mixes appropriate to the native plant community as determined and specified for each project location based on the site specific soils will be used for revegetation. The site specific seed mix will be provided by SITLA.

J. <u>Surface/Mineral Ownership:</u>

SITLA 675 East 500 South, Suite 500 Salt Lake City, UT 84102

K. Other Information:

A Class I literature survey has been conducted by Montgomery Archaeological Consultants, Inc. (MOAC). For additional details please refer to report MOAC 10-125.

A paleontological reconnaissance has been completed by Intermountain Paleo-Consulting (IPC) and a report will be provided under separate cover.

A biological field survey was completed by Grasslands Consulting, Inc. on July 13, 2010. For additional details please refer to report GCI-289.

'APIWellNo:43047512400000'

M. Lessee's or Operators' Representative & Certification:

Danielle Piernot Regulatory Analyst I Kerr-McGee Oil & Gas Onshore LP PO Box 173779 Denver, CO 80217-3779 (720) 929-6156 Tommy Thompson General Manager, Drilling Kerr-McGee Oil & Gas Onshore LP PO Box 173779 Denver, CO 80217-3779 (720) 929-6724

Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Kerr-McGee Oil & Gas Onshore LP is considered to be the operator of the subject well. Kerr-McGee Oil & Gas Onshore LP agrees to be responsible under terms and conditions of the lease for the operations conducted upon leased lands.

Bond coverage for State lease activities is provided by State Surety Bond 22013542, and for applicable Federal lease activities and pursuant to 43 CFR 3104, by Bureau of Land Management Nationwide Bond WYB000291.

I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that I have full knowledge of the State and Federal laws applicable to this operation; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

Danielle Piernot

August 13, 2010

Date

CLASS I REVIEW OF KERR-MCGEE OIL AND GAS ONSHORE LP'S 36 PROPOSED WELL LOCATIONS IN T9S, R21E, SECTION 25 (MOAC Report No. 10-125) UINTAH COUNTY, UTAH

By:

Nicole Shelnut

Prepared For:

State of Utah
School and Institutional Trust Lands Administration

Prepared Under Contract With:

Kerr-McGee Oil and Gas Onshore LP 1368 South 1200 East Vernal, Utah 84078

Prepared By:

Montgomery Archaeological Consultants, Inc. P.O. Box 219 Moab, Utah 84532

MOAC Report No. 10-125

July 26, 2010

State of Utah Public Lands Policy Coordination Office Permit No. 117

United States Department of Interior (FLPMA)
Permit No. 10-UT-60122



Grasslands Consulting, Inc.

4800 Happy Canyon Road, Suite 110, Denver, CO 80237 (303) 759-5377 Office (303) 759-5324 Fax

SPECIAL STATUS PLANT AND WILDLIFE SPECIES REPORT

Report Number: GCI #289

Report Date: August 03, 2010

Operator: Kerr-McGee Oil & Gas Onshore LP

Well: NBU 921-25D well pad (Bores: NBU 921-25C1AS, NBU 921-25D1BS, NBU 921-

25D1CS, NBU 921-25E3AS, & NBU 921-25E1CS)

Pipeline: Associated pipeline leading to proposed well pad

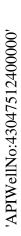
Location: Section 25, Township 9 South, Range 21 East; Uintah County, Utah

Survey-Species: Uinta Basin Hookless Cactus (*Sclerocactus wetlandicus*)

Survey Date: July 13, 2010

Observers: Grasslands Consulting, Inc. Biologists: Brad Snopek, Jennie Sinclair, Jonathan

Sexauer, Adrienne Cunningham, Garrett Peterson and field technicians.





Kerr-McGee Oil & Gas Onshore LP PO Box 173779 DENVER, CO 80217-3779

July 15, 2010

Ms. Diana Mason Division of Oil, Gas and Mining P.O. Box 145801 Salt Lake City, UT 84114-6100

Re: Directional Drilling R649-3-11

NBU 921-25D1BS

T9S-R21E

Section 25: NWNW surface and bottom hole

Surface: 807' FNL, 885' FWL Bottom Hole: 60' FNL, 716' FWL

Uintah County, Utah

Dear Ms. Mason:

Pursuant to the filing of Kerr-McGee Oil & Gas Onshore LP's (Kerr-McGee) Application for Permit to Drill regarding the above referenced well, we are hereby submitting this letter in accordance with Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling.

- Kerr-McGee's NBU 921-25D1BS is located within the Natural Buttes Unit area.
- Kerr-McGee is permitting this well as a directional well in order to minimize surface disturbance.
 Locating the well at the surface location and directionally drilling from this location, Kerr-McGee will be able to utilize the existing road and pipelines in the area.
- Furthermore, Kerr-McGee certifies that it is the sole working interest owner within 460 feet of the entire directional well bore.

Therefore, based on the above stated information, Kerr-McGee Oil & Gas Onshore LP requests the permit be granted pursuant to R649-3-11.

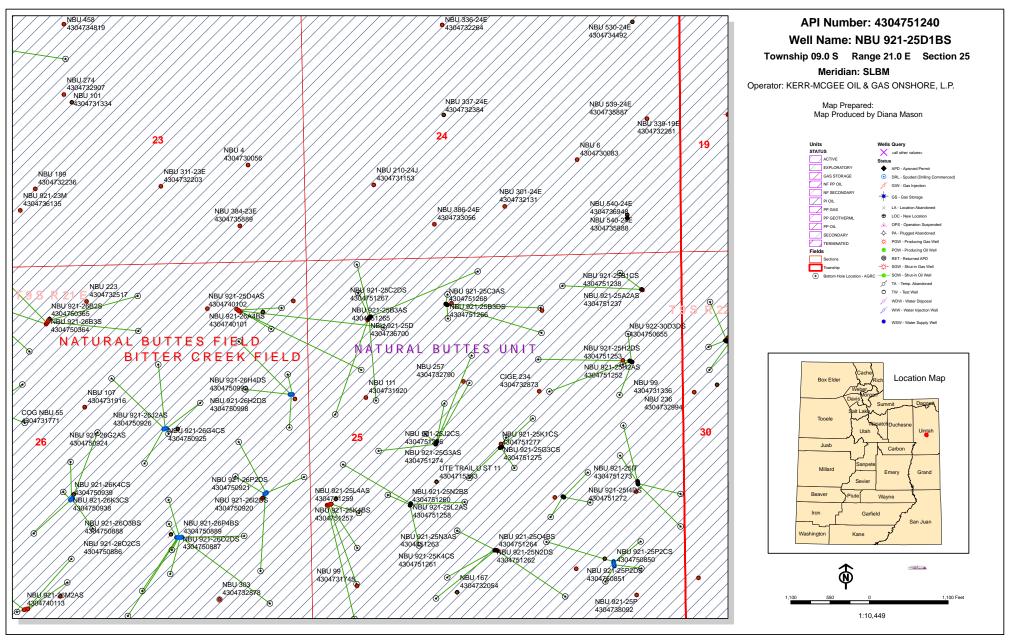
Sincerely,

KERR-MCGEE OIL & GAS ONSHORE LP

Joe Matney

Sr. Staff Landman

be Marly



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Utah State Office
P.O. Box 45155
Salt Lake City, Utah 84145-0155

IN REPLY REFER TO: 3160

3160 (UT-922)

August 17, 2010

Memorandum

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

Subject: 2010 Plan of Development Natural Buttes Unit

Uintah County, Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2010 within the Natural Buttes Unit, Uintah County, Utah.

API # WELL NAME LOCATION

(Proposed PZ WASATCH-MESA VERDE)

NBU 921-25A Pad

43-047-51237 NBU 921-25A2AS Sec 25 T09S R21E 0489 FNL 0565 FEL BHL Sec 25 T09S R21E 0252 FNL 0865 FEL

43-047-51238 NBU 921-25B1CS Sec 25 T09S R21E 0489 FNL 0575 FEL BHL Sec 25 T09S R21E 0416 FNL 1676 FEL

NBU 921-25D Pad

43-047-51239 NBU 921-25C1AS Sec 25 T09S R21E 0800 FNL 0893 FWL BHL Sec 25 T09S R21E 0190 FNL 2405 FWL

43-047-51240 NBU 921-25D1BS Sec 25 T09S R21E 0807 FNL 0885 FWL BHL Sec 25 T09S R21E 0060 FNL 0716 FWL

43-047-51241 NBU 921-25E1CS Sec 25 T09S R21E 0821 FNL 0871 FWL

BHL Sec 25 T09S R21E 1976 FNL 0947 FWL

43-047-51242 NBU 921-25E3AS Sec 25 T09S R21E 0828 FNL 0864 FWL BHL Sec 25 T09S R21E 2162 FNL 0371 FWL

43-047-51251 NBU 921-25D1CS Sec 25 T09S R21E 0814 FNL 0878 FWL

BHL Sec 25 T09S R21E 0460 FNL 0726 FWL

API # WELL NAME LOCATION

(Proposed PZ WASATCH-MESA VERDE)

NBU 921-25F Pad

43-047-51243 NBU 921-25F1BS Sec 25 T09S R21E 2580 FNL 1780 FWL 8HL Sec 25 T09S R21E 1366 FNL 2296 FWL 43-047-51244 NBU 921-25F1CS Sec 25 T09S R21E 2571 FNL 1784 FWL 8HL Sec 25 T09S R21E 1754 FNL 2259 FWL 43-047-51245 NBU 921-25F3AS Sec 25 T09S R21E 2589 FNL 1776 FWL 8HL Sec 25 T09S R21E 2034 FNL 1905 FWL 843-047-51246 NBU 921-25F3CS Sec 25 T09S R21E 2598 FNL 1772 FWL 8HL Sec 25 T09S R21E 2461 FNL 1628 FWL 43-047-51247 NBU 921-25L1BS Sec 25 T09S R21E 2607 FNL 1768 FWL

BHL Sec 25 T09S R21E 2597 FSL 0969 FWL

NBU 921-25H Pad

43-047-51248 NBU 921-25A3DS Sec 25 T09S R21E 1498 FNL 0736 FEL BHL Sec 25 T09S R21E 1110 FNL 0776 FEL 43-047-51249 NBU 921-25G1CS Sec 25 T09S R21E 1489 FNL 0754 FEL BHL Sec 25 T09S R21E 1489 FNL 1893 FEL 43-047-51250 NBU 921-25G2AS Sec 25 T09S R21E 1484 FNL 0763 FEL BHL Sec 25 T09S R21E 1439 FNL 2042 FEL BHL Sec 25 T09S R21E 1439 FNL 2042 FEL BHL Sec 25 T09S R21E 1439 FNL 0745 FEL BHL Sec 25 T09S R21E 1538 FNL 0857 FEL BHL Sec 25 T09S R21E 1538 FNL 0857 FEL BHL Sec 25 T09S R21E 1538 FNL 0857 FEL BHL Sec 25 T09S R21E 1502 FNL 0727 FEL BHL Sec 25 T09S R21E 1958 FNL 0913 FEL

NBU 921-25J Pad

43-047-51254 NBU 921-25J4AS Sec 25 T09S R21E 1878 FSL 1725 FEL BHL Sec 25 T09S R21E 1795 FSL 1360 FEL 43-047-51255 NBU 921-25J4CS Sec 25 T09S R21E 1886 FSL 1743 FEL BHL Sec 25 T09S R21E 1604 FSL 1920 FEL BHL Sec 25 T09S R21E 1882 FSL 1734 FEL BHL Sec 25 T09S R21E 2218 FSL 1381 FEL

NBU 921-25K Pad

43-047-51257 NBU 921-25K4BS Sec 25 T09S R21E 1838 FSL 1400 FWL BHL Sec 25 T09S R21E 1848 FSL 2161 FWL 43-047-51258 NBU 921-25L2AS Sec 25 T09S R21E 1848 FSL 1402 FWL BHL Sec 25 T09S R21E 2423 FSL 0465 FWL

API #	WE	LL NAME			LOCA	TION		
(Proposed PZ	WASA	ATCH-MESA VI	ERDE))				
43-047-51259	NBU	-			 R21E R21E		-	
43-047-51260	NBU				R21E R21E			
NBU 921-25N	Pad							
43-047-51261	NBU				R21E R21E			
43-047-51262	NBU				R21E R21E			
43-047-51263	NBU				R21E R21E			
43-047-51264	NBU				 R21E R21E		_	
NBU 921-25C	Pad							
43-047-51265	NBU				R21E R21E			
43-047-51266	NBU				R21E R21E			
43-047-51267	NBU				R21E R21E			
43-047-51268	NBU				 R21E R21E			
NBU 921-25I 1	Pad							
43-047-51269	NBU				R21E R21E			
43-047-51270	NBU				R21E R21E			
43-047-51271	NBU	-			 R21E R21E		_	
43-047-51272	NBU				R21E R21E			
43-047-51273	NBU				R21E R21E			

Page 4

API # WELL NAME

LOCATION

(Proposed PZ WASATCH-MESA VERDE)

NBU 921-25J2 Pad

43-047-51274 NBU 921-25G3AS Sec 25 T09S R21E 2611 FSL 2578 FEL BHL Sec 25 T09S R21E 2265 FNL 2136 FEL 43-047-51275 NBU 921-25G3CS Sec 25 T09S R21E 2606 FSL 2587 FEL BHL Sec 25 T09S R21E 2530 FNL 2518 FEL BHL Sec 25 T09S R21E 2530 FNL 2518 FEL BHL Sec 25 T09S R21E 2601 FSL 2596 FEL BHL Sec 25 T09S R21E 2310 FSL 2410 FEL BHL Sec 25 T09S R21E 2596 FSL 2410 FEL BHL Sec 25 T09S R21E 2596 FSL 2605 FEL BHL Sec 25 T09S R21E 2596 FSL 2631 FWL

This office has no objection to permitting the wells at this time.

Michael L. Coulthard

Digitally signed by Michael L. Coulthard
DN: cn-Michael L. Coulthard, o-Bureau of Land Management, ou-Branch of Minerals,
small-Michael Coulthardgelorm, pou, c-US
pare-2010 Rg 17 J 145946, nG007

bcc: File - Natural Buttes Unit
 Division of Oil Gas and Mining
 Central Files
 Agr. Sec. Chron
 Fluid Chron

MCoulthard:mc:8-17-10

From: Jim Davis

To: Bonner, Ed; Garrison, LaVonne; Hill, Brad; Mason, Diana

CC: Bartlett, Floyd; Laura.Gianakos@anadarko.com; Piernot, Danielle; Upch...

Date: 9/2/2010 9:13 AM

Subject: SITLA approval of Kerr McGee wells **Attachments:** KMG approvals and paleo 9.1.2010.xlsx

The following wells have been approved by SITLA including arch clearance. Paleo clearance is also granted with stipulations as noted.

Full Paleo monitoring: All ground-disturbing activities must be monitored by a permitted paleontologist.

```
NBU 922-29F4DS [API #4304751207] Full Monitoring IPC 10-08
 NBU 922-29G4CS [API #4304751208] Full Monitoring
                                                  IPC 10-08
 NBU 922-29J4BS [API #4304751209] Full Monitoring
                                                  IPC 10-08
 NBU 922-29K1DS [API #4304751210] Full Monitoring
                                                   IPC 10-08
 NBU 922-29G1AS [API #4304751194] Full Monitoring
                                                  IPC 10-06
 NBU 922-29G1DS [API #4304751195] Full Monitoring
                                                   IPC 10-06
 NBU 922-29G2BS [API #4304751196] Full Monitoring
                                                  IPC 10-06
 NBU 922-29G3BS [API #4304751197] Full Monitoring
                                                  IPC 10-06
NBU 921-25A3DS [API 4304751248]
                                                  IPC 10-21
                                    Full Monitoring
NBU 921-25G1CS [API 4304751249]
                                                  IPC 10-21
                                    Full Monitoring
NBU 921-25G2AS [API 4304751250]
                                                  IPC 10-21
                                    Full Monitoring
NBU 921-25H2AS [API 4304751252]
                                    Full Monitoring
                                                  IPC 10-21
NBU 921-25H2DS [API 4304751253]
                                    Full Monitoring
                                                  IPC 10-21
NBU 921-25G3AS [API 4304751274]
                                    Full Monitoring
                                                  IPC 10-23
NBU 921-25G3CS [API 4304751275]
                                                  IPC 10-23
                                    Full Monitoring
NBU 921-25J2CS [API 4304751276]
                                                  IPC 10-23
                                    Full Monitoring
NBU 921-25K1CS [API 4304751277]
                                                  IPC 10-23
                                    Full Monitoring
NBU 921-25A2AS [API 4304751237]
                                    Full Monitoring IPC 10-21
NBU 921-25B1CS [API 4304751238]
                                    Full Monitoring IPC 10-21
```

Spot Paleo Monitoring: All ground-disturbing activities must be monitored by a permitted paleontologist at the beginning of construction and thereafter spot-monitored as paleontological conditions merit.

```
Spot Monitoring IPC 10-20
NBU 921-25C1AS [API 4304751239]
NBU 921-25D1BS [API 4304751240]
                                    Spot Monitoring IPC 10-20
                                    Spot Monitoring IPC 10-20
NBU 921-25D1CS [API 4304751251]
NBU 921-25E1CS [API 4304751241]
                                    Spot Monitoring IPC 10-20
                                    Spot Monitoring IPC 10-20
NBU 921-25E3AS [API 4304751242]
NBU 921-25F1BS [API 4304751243]
                                    Spot Monitoring IPC 10-21
NBU 921-25F1CS [API 4304751244]
                                    Spot Monitoring IPC 10-21
NBU 921-25F3AS [API 4304751245]
                                    Spot Monitoring IPC 10-21
NBU 921-25F3CS [API 4304751246]
                                    Spot Monitoring IPC 10-21
NBU 921-25L1BS [API 4304751247]
                                    Spot Monitoring IPC 10-21
NBU 921-25J1DS [API 4304751256]
                                    Spot Monitoring IPC 10-23
NBU 921-25J4AS [API 4304751254]
                                    Spot Monitoring IPC 10-23
NBU 921-25J4CS [API 4304751255]
                                    Spot Monitoring IPC 10-23
NBU 921-25K4BS [API 4304751257]
                                    Spot Monitoring IPC 10-22
NBU 921-25L2AS [API 4304751258]
                                    Spot Monitoring IPC 10-22
NBU 921-25L4AS [API 4304751259]
                                    Spot Monitoring IPC 10-22
                                    Spot Monitoring IPC 10-22
NBU 921-25N2BS [API 4304751260]
NBU 921-25K4CS [API 4304751261]
                                    Spot Monitoring IPC 10-23
NBU 921-25N2DS [API 4304751262]
                                    Spot Monitoring IPC 10-23
NBU 921-25N3AS [API 4304751263]
                                    Spot Monitoring IPC 10-23
```

```
NBU 921-25O4BS [API 4304751264]
                                    Spot Monitoring IPC 10-23
                                    Spot Monitoring IPC 10-20
NBU 921-25B3AS [API 4304751265]
NBU 921-25B3DS [API 4304751266]
                                    Spot Monitoring IPC 10-20
NBU 921-25C2DS [API 4304751267]
                                    Spot Monitoring IPC 10-20
                                    Spot Monitoring IPC 10-20
NBU 921-25C3AS [API 4304751268]
NBU 921-25IT [API 4304751273]
                                    Spot Monitoring IPC 10-23
NBU 921-25H3DS [API 4304751269]
                                    Spot Monitoring IPC 10-23
NBU 921-25I2AS [API 4304751270]
                                    Spot Monitoring IPC 10-23
NBU 921-25I4AS [API 4304751271]
                                    Spot Monitoring IPC 10-23
NBU 921-25I4DS [API 4304751272]
                                    Spot Monitoring IPC 10-23
NBU 922-29A1BS [API #4304751183]
                                    Spot Monitoring IPC 10-06
 NBU 922-29A1CS [API #4304751184] Spot Monitoring IPC 10-06
 NBU 922-29A4CS [API #4304751185] Spot Monitoring IPC 10-06
 NBU 922-29H1BS [API #4304751186] Spot Monitoring IPC 10-06
 NBU 922-29B2CS [API #4304751187] Spot Monitoring IPC 10-06
 NBU 922-29B4AS [API #4304751188] Spot Monitoring IPC 10-06
                                                             (SITLA surf/ Fed Min)
 NBU 922-29C2AS [API #4304751189] Spot Monitoring IPC 10-06
                                                             (SITLA surf/ Fed Min)
 NBU 922-29C4AS [API #4304751190] Spot Monitoring IPC 10-06
 NBU 922-29B1AS [API #4304751191] Spot Monitoring IPC 10-06
 NBU 922-29B1DS [API #4304751192] Spot Monitoring IPC 10-06
 NBU 922-29B2BS [API #4304751193] Spot Monitoring IPC 10-06
 NBU 922-29D4DS [API #4304751198] Spot Monitoring IPC 10-05
 NBU 922-29E3BS [API #4304751199] Spot Monitoring IPC 10-05
 NBU 922-29F3AS [API #4304751200] Spot Monitoring IPC 10-05
 NBU 922-29F3BS [API #4304751201] Spot Monitoring IPC 10-05
 NBU 922-29G4AS [API #4304751202] Spot Monitoring IPC 10-06
 NBU 922-29H1CS [API #4304751203] Spot Monitoring IPC 10-06
 NBU 922-29H4CS [API #4304751204] Spot Monitoring IPC 10-06
 NBU 922-2911BS [API #4304751205] Spot Monitoring IPC 10-06
 NBU 922-29I1CS [API #4304751206] Spot Monitoring IPC 10-06
 NBU 922-29K2CS [API #4304751211] Spot Monitoring IPC 10-07
 NBU 922-29K4AS [API #4304751212] Spot Monitoring IPC 10-07
 NBU 922-29L1AS [API #4304751213] Spot Monitoring IPC 10-07
 NBU 922-29L2BS [API #4304751214] Spot Monitoring IPC 10-07
 NBU 922-29L2CS [API #4304751215] Spot Monitoring IPC 10-07
 NBU 922-29L3CS [API #4304751216] Spot Monitoring IPC 10-07
 NBU 922-29M2AS [API #4304751217] Spot Monitoring IPC 10-07
 NBU 922-29N2BS [API #4304751218] Spot Monitoring IPC 10-07
 NBU 922-29N3BS [API #4304751219] Spot Monitoring IPC 10-07
 NBU 922-30I4BS [API #4304751220] Spot Monitoring IPC 10-07 (SITLA surf/ Fed Min)
 NBU 922-30I4CS [API #4304751221] Spot Monitoring IPC 10-07 (SITLA surf/Fed Min)
 NBU 922-29J4CS [API #4304751222] Spot Monitoring IPC 10-08
 NBU 922-29N1BS [API #4304751223] Spot Monitoring IPC 10-08
 NBU 922-29O1CS [API #4304751224] Spot Monitoring IPC 10-08
```

That's quite a list, so I'm attaching a quick-and-dirty spreadsheet of the same data. This may be helpful to some of you.

Thanks.

-Jim

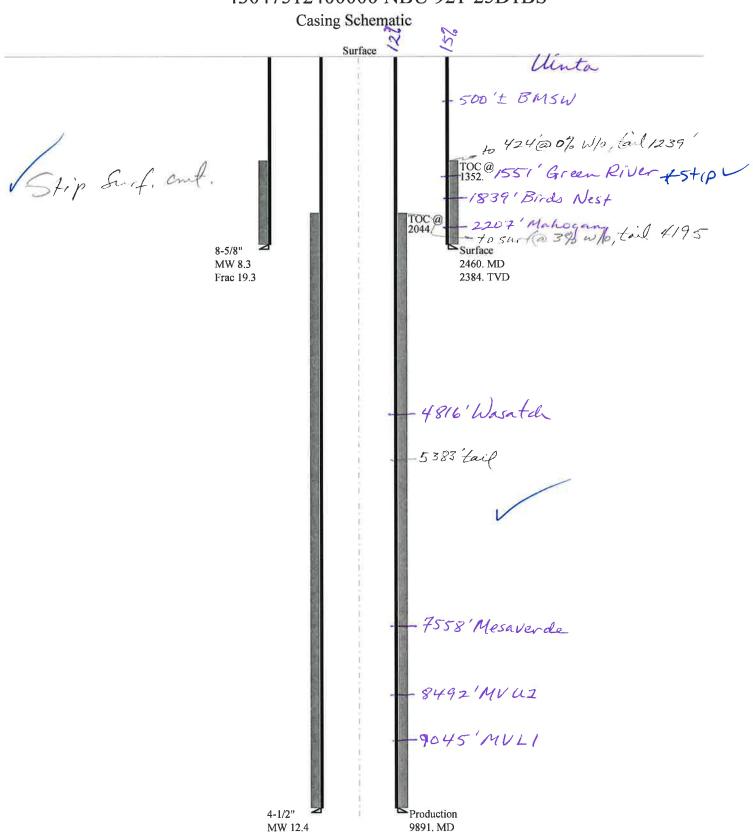
'APIWellNo:43047512400000'

Jim Davis Utah Trust Lands Administration jimdavis1@utah.gov Phone: (801) 538-5156

BOPE REVIEW KERR-MCGEE OIL & GAS ONSHORE, L.P. NBU 921-25D1BS 43047512400000

Well Name		KERR-MCGEE	OII	L & GAS ONSHOR	RE	, L.P. NBU 921-2	25D1	D1BS 430475124
String		Surf	T	Prod	Ī		T	
Casing Size(")		8.625	1	4.500	İ		Ī	
Setting Depth (TVD)		2460	t	9786	ľ		Ī	
Previous Shoe Setting Dep	th (TVD)	40	t	2460	ľ		Ī	
Max Mud Weight (ppg)		8.3	t	12.4	ľ		Ť	
BOPE Proposed (psi)		500	t	5000	ľ		Ť	<u></u>
Casing Internal Yield (psi)		3390	t	7780	ľ		ľ	<u>, </u>
Operators Max Anticipate	d Pressure (psi)	6199	t	12.2	ľ		ľ	<u>'</u>
1	u /	10.00	_	1.2.2	Ц	,	Į.	<u> </u>
Calculations	Sur	rf String				8.6	525	5 "
Max BHP (psi)		.052*Set	tiı	ng Depth*MV	W	7= 1066		
								BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Ma	ax BHP-(0.12	*	Setting Deptl	h))= 771		NO air drill
MASP (Gas/Mud) (psi)	Ma	ax BHP-(0.22	*	Setting Deptl	h))= 525		NO OK
			_		_			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP22*(Setting I	Depth - Previo	ou	is Shoe Deptl	h))= 534		NO Reasonable depth in area
Required Casing/BOPE To						2373		psi
*Max Pressure Allowed @	Previous Casing Shoe=					40		psi *Assumes 1psi/ft frac gradient
Calculations	Duc	od String	_		_	1.5	500	00 "
Max BHP (psi)	110		tir	ng Depth*M\	(X/		-	
Wax Bill (psi)		.032 300	LII	ing Deptir Wi	••	/= 6310		BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	M:	ax BHP-(0.12)*	Setting Dentl	h))= 5136	_	NO NO
MASP (Gas/Mud) (psi)		ax BHP-(0.22	_		_		=	YES OK
(Gastilla) (psi)	1410	IX DITT (0.22		betting Bepti		4157	_	*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP- 22*(Setting I	Denth - Previo	011	ıs Shoe Dentl	h))= 4698	_	NO Reasonable
Required Casing/BOPE To				so once Bepti	_	5000	=	psi
*Max Pressure Allowed @			_		_	2460	=	psi *Assumes 1psi/ft frac gradient
Max 1 ressure 7 moved w	Trevious Casing Shoc		_		_	2460	_	psi rissumes ipsi/it nue grudent
Calculations	:	String						"
Max BHP (psi)		.052*Set	tiı	ng Depth*MV	W	/=		
								BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Ma	ax BHP-(0.12	2*	Setting Deptl	h))=		NO NO
MASP (Gas/Mud) (psi)	Ma	ax BHP-(0.22)*	Setting Deptl	h))=		NO
								*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP22*(Setting I	Depth - Previo	ou	ıs Shoe Deptl	h))=		NO
Required Casing/BOPE To	est Pressure=							psi
*Max Pressure Allowed @	Previous Casing Shoe=							psi *Assumes 1psi/ft frac gradient
Calculations		String	_		_		_	""
Max BHP (psi)	,		tii	ng Depth*M\	(X/	7=	_	-
(psi)		.032 500	tii	ing Deptir Wi	_	<u> </u>	_	BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Mz	ax BHP-(0.12)*:	Setting Dentl	h))=	<u> </u>	NO NO
MASP (Gas/Mud) (psi)		ax BHP-(0.22	_		_			NO I
(Suorizua) (Por)	1410	(0.22	_	Бери	-)	1		*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP22*(Setting I	Depth - Previo	ου	ıs Shoe Deptl	h))=	_	NO I
Required Casing/BOPE To	` •	1			_	-	=	psi
*Max Pressure Allowed @			_		_	1	=	psi *Assumes 1psi/ft frac gradient

43047512400000 NBU 921-25D1BS



9786. TVD

43047512400000 NBU 921-25D1BS Well name:

KERR-MCGEE OIL & GAS ONSHORE, L.P. Operator:

Surface String type:

Project ID: 43-047-51240

UINTAH COUNTY Location:

Design parameters: Minimum design factors: **Environment:**

Collapse Collapse: H2S considered? No Design factor Surface temperature: 74 °F Mud weight: 8.330 ppg 1.125

107 °F Design is based on evacuated pipe. Bottom hole temperature: 1.40 °F/100ft Temperature gradient:

Minimum section length: 100 ft

Burst:

1.00 1,352 ft Design factor Cement top: **Burst**

Max anticipated surface

(psi)

1031

(psi)

1880

1.823

pressure: 2,165 psi Internal gradient: 0.120 psi/ft Tension: Directional Info - Build & Drop

Calculated BHP Kick-off point 2,451 psi 8 Round STC: 1.80 (J) 300 ft 1.70 (J) 8 Round LTC: Departure at shoe: 530 ft

1.60 (J) No backup mud specified. Buttress: Maximum dogleg: 2 °/100ft Premium: 1.50 (J) Inclination at shoe: 18°

1.50 (B) Re subsequent strings: Body yield:

Next setting depth: 9,786 ft Tension is based on air weight. Next mud weight: 12.400 ppg Neutral point: Next setting BHP: 6,304 psi 2.152 ft Fracture mud wt: 19.250 ppg

Fracture depth: 2,460 ft Injection pressure: 2,460 psi

66.7

348

5.21 J

True Vert Run Segment **Nominal** End Measured Drift Est. Length Size Weight **Finish** Depth Depth Diameter Cost Seq Grade (lbs/ft) (ft) (in) (ft) (ft) (in) (\$) 1 2460 8.625 28.00 I-55 LT&C 2384 2460 7.892 97416 Tension Run Collapse Collapse Collapse **Burst** Burst **Burst Tension Tension** Strenath Strength Design Sea Load Strenath Design Load Design Load **Factor Factor** (kips) (kips) **Factor**

(psi)

3390

1.38

(psi)

2451

Prepared Helen Sadik-Macdonald Phone: 801 538-5357 Date: October 5,2010 Div of Oil, Gas & Mining FAX: 801-359-3940 Salt Lake City, Utah by:

Remarks:

1

Collapse is based on a vertical depth of 2384 ft, a mud weight of 8.33 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

Well name:

43047512400000 NBU 921-25D1BS

Operator:

KERR-MCGEE OIL & GAS ONSHORE, L.P.

String type:

Production

Project ID: 43-047-51240

Location:

UINTAH COUNTY

> Minimum design factors: **Environment:**

Collapse

Mud weight:

Internal fluid density:

Design parameters:

12.400 ppg 2.330 ppg Collapse: Design factor

1.125

H2S considered?

No Surface temperature: 74 °F Bottom hole temperature: 211 °F 1.40 °F/100ft

Temperature gradient:

Minimum section length: 100 ft

Burst:

Design factor

1.00

Cement top:

2,044 ft

Burst

Max anticipated surface pressure:

Internal gradient: Calculated BHP

4,151 psi 0.220 psi/ft 6,304 psi

No backup mud specified.

Tension:

8 Round STC: 1.80 (J) 1.80 (J) 8 Round LTC: Buttress: 1.60 (J) 1.50 (J) Premium:

Body yield: 1.60 (B)

Tension is based on air weight. Neutral point: 8,077 ft Directional Info - Build & Drop

Kick-off point 300 ft 766 ft Departure at shoe: Maximum dogleg: 2 °/100ft

Inclination at shoe: o°

Run	Segment		Nominal		End	True Vert	Measured	Drift	Est.
Seq	Length (ft)	Size (in)	Weight (lbs/ft)	Grade	Finish	Depth (ft)	Depth (ft)	Diameter (in)	Cost (\$)
1	9891	4.5	11.60	I-80	LT&C	9786	9891	3.875	130561
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	5119	6360	1.242	6304	7780	1.23	113.5	212	1.87 J

Prepared

Helen Sadik-Macdonald

Div of Oil, Gas & Mining by:

Phone: 801 538-5357 FAX: 801-359-3940

Date: October 5,2010 Salt Lake City, Utah

Collapse is based on a vertical depth of 9786 ft, a mud weight of 12.4 ppg. An internal gradient of .121 psi/ft was used for collapse from TD Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

ON-SITE PREDRILL EVALUATION

Utah Division of Oil, Gas and Mining

Operator KERR-MCGEE OIL & GAS ONSHORE, L.P.

Well Name NBU 921-25D1BS

API Number 43047512400000 APD No 2925 Field/Unit NATURAL BUTTES

Location: 1/4,1/4 NWNW Sec 25 Tw 9.0S Rng 21.0E 807 FNL 885 FWL

GPS Coord (UTM) 627538 4429953 Surface Owner

Participants

Floyd Bartlett (DOGM), Sheila Wopsock, Clay Einerson, Roger Perry, Laura Gianokas, Lovel Young, Grizz Oleen, (Kerr McGee), Mitch.Batty, John Slaugh, (Timberline Engineering and Land Surveying), Ed Bonner (SITLA), Ben Williams (UDWR).

Regional/Local Setting & Topography

The general area is the Natural Buttes Unit in a major un-named drainage west of the lower portion of the Sand Wash drainage of Uintah, County, approximately 34 air miles and 41.7 road miles south of Vernal, Utah. Access is by State of Utah Highways, Uintah County and existing oilfield development roads. Topography of the area is characterized by open flats bordered or dissected by numerous sub-drainages, which often become steep with ridges and draws with exposed sandstone layers. No perennial streams occur in the drainage. Individual draws or washes are ephemeral with spring runoff or flows from sometimes-intense summer rainstorms. No springs exist in the area. An occasional constructed pond occurs furnishing water for antelope or livestock.

The NBU 921-25D pad will be created by enlarging the existing pad of the NBU 921-25D gas well. Five gas wells, to be directionally drilled, will be added. They are the NBU 921-25E3AS, 921-25E1CS, 921-25D1CS, 921-25D1BS and 921-25C1AS. The existing pad will be extended in all directions except to the west. The site is on the north slope of a ridge with a drainage to the east which will be filled. Significant excavation will be needed to extend the pad leaving an excess of 4,800 cubic yards of spoils to be stockpiled. A draw to the west beyond Corner 10 will be avoided. No drainage diversions are required. The White River is approximately 3 miles down drainage. The selected site as adjusted appears to be suitable for enlarging a pad, drilling and operating the proposed wells and is the best site in the immediate area.

Both the surface and minerals are owned by SITLA.

Surface Use Plan

Current Surface Use

Grazing Wildlfe Habitat Existing Well Pad

New Road Miles Well Pad Src Const Material Surface Formation

0 Width 352 Length 425 Onsite UNTA

Ancillary Facilities N

Waste Management Plan Adequate?

Environmental Parameters

Affected Floodplains and/or Wetlands N

Flora / Fauna

10/6/2010 Page 1

Vegetation is a poor desert shrub type, which includes shadscale, curly mesquite, broom snakeweed and halogeton..

Antelope, sheep during the winter, rabbits, coyotes, and small mammals, birds and raptors.

Soil Type and Characteristics

Surface soils are shallow sandy loam.

Erosion Issues N

Sedimentation Issues N

Site Stability Issues N

Drainage Diverson Required? N

Berm Required? Y

Erosion Sedimentation Control Required? N

Paleo Survey Run? Y Paleo Potental Observed? N Cultural Survey Run? Y Cultural Resources? N

Reserve Pit

Site-Specific Factors	Site R	anking	
Distance to Groundwater (feet)	100 to 200	5	
Distance to Surface Water (feet)	>1000	0	
Dist. Nearest Municipal Well (ft)	>5280	0	
Distance to Other Wells (feet)		20	
Native Soil Type	Mod permeability	10	
Fluid Type	Fresh Water	5	
Drill Cuttings	Normal Rock	0	
Annual Precipitation (inches)		0	
Affected Populations			
Presence Nearby Utility Conduits	Not Present	0	
	Final Score	40	1 Sensitivity Level

Characteristics / Requirements

The proposed reserve pit is 104' x 260' x 12' deep located in a cut on the southeast side of the location. Kerr McGee plans a 30-mil liner with a double felt sub-liner.

Closed Loop Mud Required? N Liner Required? Y Liner Thickness 30 Pit Underlayment Required? Y

Other Observations / Comments

Evaluator	Date / Time
Floyd Bartlett	8/26/2010

10/6/2010 Page 2

Application for Permit to Drill Statement of Basis

10/6/2010 Utah Division of Oil, Gas and Mining

Page 1

APD No	API WellNo	Status \	Well Type	Surf Owner	CBM
2925	43047512400000	SITLA	GW	S	No
Operator	KERR-MCGEE OIL & GAS ONS	SHORE, L.P.	Surface Owner-APD		
Well Name	NBU 921-25D1BS	1	Unit	NATURAL E	BUTTES
Field	NATURAL BUTTES	,	Type of Work	DRILL	
Location	NWNW 25 9S 21E S 803	7 FNL 885 FWI	L GPS Coord (UTM)	627546E 44	29953N

Geologic Statement of Basis

Kerr McGee proposes to set 2,460' of surface casing at this location. The depth to the base of the moderately saline water at this location is estimated to be at a depth of 500'. A search of Division of Water Rights records shows no water wells within a 10,000 foot radius of the center of Section 25. The surface formation at this site is the Uinta Formation. The Uinta Formation is made up of interbedded shales and sandstones. The sandstones are mostly lenticular and discontinuous and should not be a significant source of useable ground water. The proposed casing and cement should adequately protect any usable ground water.

Brad Hill 9/28/2010 **APD Evaluator Date / Time**

Surface Statement of Basis

The general area is the Natural Buttes Unit in a major un-named drainage west of the lower portion of the Sand Wash drainage of Uintah, County, approximately 34 air miles and 41.7 road miles south of Vernal, Utah. Access is by State of Utah Highways, Uintah County and existing oilfield development roads. Topography of the area is characterized by open flats bordered or dissected by numerous sub-drainages, which often become steep with ridges and draws with exposed sandstone layers. No perennial streams occur in the drainage. Individual draws or washes are ephemeral with spring runoff or flows from sometimes-intense summer rainstorms. No springs exist in the area. An occasional constructed pond occurs furnishing water for antelope or livestock.

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Both the surface and minerals are owned by SITLA. Ed Bonner represented SITLA at the pre-site investigation. Mr. Bonner had no concerns pertaining to this location excepted as covered above. SITLA will provide site reclamation standards and a seed mix.

Ben Williams represented the Utah Division of Wildlife Resources. Mr. Williams stated the area is classified as crucial yearlong antelope habitat but recommended no restrictions for this species. No other wildlife will be significantly affected.

Floyd Bartlett 8/26/2010
Onsite Evaluator Date / Time

'APIWellNo:43047512400000'

Application for Permit to Drill Statement of Basis

Utah Division of Oil, Gas and Mining

Page 2

Conditions of Approval / Application for Permit to Drill

Category Condition

10/6/2010

Pits A synthetic liner with a minimum thickness of 30 mils with a double felt subliner shall be properly installed and

maintained in the reserve pit.

Surface The reserve pit shall be fenced upon completion of drilling operations.

WORKSHEET APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 8/13/2010 **API NO. ASSIGNED:** 43047512400000

WELL NAME: NBU 921-25D1BS

OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P. (N2995) **PHONE NUMBER:** 720 929-6156

CONTACT: Danielle Piernot

PROPOSED LOCATION: NWNW 25 090S 210E **Permit Tech Review:**

> **SURFACE:** 0807 FNL 0885 FWL **Engineering Review:**

> **BOTTOM:** 0060 FNL 0716 FWL Geology Review:

COUNTY: UINTAH

LATITUDE: 40.01204 **LONGITUDE:** -109.50559 **UTM SURF EASTINGS: 627546.00** NORTHINGS: 4429953.00

FIELD NAME: NATURAL BUTTES

LEASE TYPE: 3 - State

PROPOSED PRODUCING FORMATION(S): WASATCH-MESA VERDE LEASE NUMBER: UO 1189 ST

SURFACE OWNER: 3 - State **COALBED METHANE: NO**

RECEIVED AND/OR REVIEWED: LOCATION AND SITING: ✓ PLAT R649-2-3.

Unit: NATURAL BUTTES Bond: STATE/FEE - 22013542

Potash R649-3-2. General

Oil Shale 190-3 R649-3-3. Exception

Oil Shale 190-13 Drilling Unit

Board Cause No: Cause 173-14 Water Permit: Permit #43-8496

Effective Date: 12/2/1999 **RDCC Review:**

Siting: Suspends General Siting **Fee Surface Agreement**

R649-3-11. Directional Drill ✓ Intent to Commingle

Commingling Approved

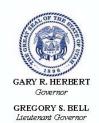
Oil Shale 190-5

Comments: Presite Completed

3 - Commingling - ddoucet 5 - Statement of Basis - bhill Stipulations:

15 - Directional - dmason 17 - Oil Shale 190-5(b) - dmason 25 - Surface Casing - hmacdonald

API Well No: 43047512400000



State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA

Permit To Drill

Well Name: NBU 921-25D1BS API Well Number: 43047512400000 Lease Number: UO 1189 ST

Surface Owner: STATE **Approval Date:** 10/7/2010

Issued to:

KERR-MCGEE OIL & GAS ONSHORE, L.P., P.O. Box 173779, Denver, CO 80217

Authority:

Pursuant to Utah Code Ann. §40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 173-14. The expected producing formation or pool is the WASATCH-MESA VERDE Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

Duration:

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

Commingle:

In accordance with Board Cause No. 173-14, commingling of the production from the Wasatch formation and the Mesaverde formation in this well is allowed.

General:

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

Conditions of Approval:

In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.

In accordance with the Order in Cause No. 190-5(b) dated October 28, 1982, the operator shall comply with the requirements of Rules R649-3-31 and R649-3-27 pertaining to Designated Oil Shale Areas. Additionally, the operators shall ensure that the surface and or production casing is properly cemented over the entire oil shale section as defined by Rule R649-3-31. The Operator shall report the actual depth the oil shale is encountered to the division.

Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis (copy attached).

Surface casing shall be cemented to the surface.

API Well No: 43047512400000

Additional Approvals:

The operator is required to obtain approval from the Division of Oil, Gas and mining before performing any of the following actions during the drilling of this well:

- Any changes to the approved drilling plan contact Dustin Doucet
- Significant plug back of the well contact Dustin Doucet
- Plug and abandonment of the well contact Dustin Doucet

Notification Requirements:

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

- Within 24 hours following the spudding of the well contact Carol Daniels OR
- submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website at https://oilgas.ogm.utah.gov
- 24 hours prior to testing blowout prevention equipment contact Dan Jarvis
- 24 hours prior to cementing or testing casing contact Dan Jarvis
- Within 24 hours of making any emergency changes to the approved drilling program
- contact Dustin Doucet
- 24 hours prior to commencing operations to plug and abandon the well contact Dan Jarvis

Contact Information:

The following are Division of Oil, Gas and Mining contacts and their telephone numbers (please leave a voicemail message if the person is not available to take the call):

- Carol Daniels 801-538-5284 office
- Dustin Doucet 801-538-5281 office

801-733-0983 - after office hours

• Dan Jarvis 801-538-5338 - office

801-231-8956 - after office hours

Reporting Requirements:

All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) due within 5 days of spudding the well
- Monthly Status Report (Form 9) due by 5th day of the following calendar month
- Requests to Change Plans (Form 9) due prior to implementation
- Written Notice of Emergency Changes (Form 9) due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) due prior to implementation
- Report of Water Encountered (Form 7) due within 30 days after completion
- Well Completion Report (Form 8) due within 30 days after completion or plugging

Approved By:

For John Rogers Associate Director, Oil & Gas

Print Form

BLM - Vernal Field Office - Notification Form

Ope	rator <u>KERR-McGEE OIL & GA</u>	<u>\S</u> Rig Name/# <u>BU</u> (CKET RIG				
Submitted By ANDY LYTLE Phone Number 720.929.6100							
	Name/Number NBU 921-25		0.020.0100				
	Qtr <u>NWNW</u> Section 25		Range 21E				
	se Serial Number <u>UO 1189 ST</u>		range <u>zir</u>				
	Number 4304751240						
Λi I	Number 4304751240						
Spuc	d Notice – Spud is the initial	spudding of the w	ell not drilling				
_	below a casing string.	spadaling of the W	cii, not ariiing				
outi	sciow a casing same.						
	Date/Time <u>01/11/2011</u>	10:00 HRS AM	рм 🗍				
		10.00 TH C 7 TT	· · · · ·				
Casii	ng – Please report time casi	ing run starts, not o	rementing				
time	•	ing rain ocarco, moc c					
	Surface Casing		RECEIVED				
H	Intermediate Casing		JAN 1 0 2011				
H	Production Casing						
H			DIV. OF OIL, GAS & MINING				
	Liner						
Ш	Other						
	Data/Time 01/25/2011	00:00 HDQ AM	DM 🖳				
	Date/Time <u>01/25/2011</u>	08:00 HRS AM	PM				
BOP	E						
DUP		anaina naint					
	Initial BOPE test at surface	- .					
	BOPE test at intermediate	casing point					
	30 day BOPE test						
	Other						
	Date/Time	AM [PM 🔛				
Rem	arks ESTIMATED DATE AND TIME. PLEA	SE CONTACT KENNY GATHINGS	S AT				
435.78	1.7048 OR LOVEL YOUNG AT 435.828.098	36					

	STATE OF UTAH DEPARTMENT OF NATURAL RESOURCE	rec	FORM 9
	DIVISION OF OIL, GAS, AND MI		5.LEASE DESIGNATION AND SERIAL NUMBER: UO 1189 ST
SUND	RY NOTICES AND REPORTS	ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
Do not use this form for propo bottom-hole depth, reenter plu DRILL form for such proposals	7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES		
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 921-25D1BS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONS	HORE, L.P.		9. API NUMBER: 43047512400000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th S	PHC treet, Suite 600, Denver, CO, 80217 3779	DNE NUMBER: 9 720 929-6007 Ext	9. FIELD and POOL or WILDCAT: NATURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0807 FNL 0885 FWL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSHI Qtr/Qtr: NWNW Section: 2	IP, RANGE, MERIDIAN: 5 Township: 09.0S Range: 21.0E Meridian	: S	STATE: UTAH
11.	CK APPROPRIATE BOXES TO INDICA	TE NATURE OF NOTICE, REPORT,	OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	☐ ACIDIZE	ALTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	☐ CHANGE TO PREVIOUS PLANS	CHANGE TUBING	☐ CHANGE WELL NAME
	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
☐ SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
✓ SPUD REPORT Date of Spud:	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
1/12/2011	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
DRILLING REPORT	LI TUBING REPAIR		☐ WATER DISPOSAL
Report Date:	WATER SHUTOFF	☐ SI TA STATUS EXTENSION	APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:
MIRU PETE MARTIN RAN 14" 36.7# SCH SPUD WELL	DMPLETED OPERATIONS. Clearly show all per light per ligh	CONDUCTOR HOLE TO 40'. CMT W/28 SX READY MIXE 2011 AT 8:30 HRS. Oil FOR	
NAME (PLEASE PRINT) Gina Becker	PHONE NUMBER 720 929-6086	TITLE Regulatory Analyst II	
SIGNATURE N/A		DATE 1/14/2011	

STATE OF UTAH

DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING

ENTITY ACTION FORM

Operator:

KERR McGEE OIL & GAS ONSHORE LP

Operator Account Number: N 2995

Address:

P.O. Box 173779

city DENVER

state CO zip 80217 Phone Number: (720) 929-6100

Well 1

Weil	Name	QQ	Sec	Twp	Rng	County
NBU 921-25D1BS		NWNW	25	98	21E	UINTAH
Current Entity Number	New Entity Number	s	pud Da	te		ity Assignment
99999	2900	1	/12/201	1	1/	26/2011
	NBU 921-25D1BS Current Entity Number	Current Entity New Entity Number Number	NBU 921-25D1BS NWNW Current Entity New Entity Number S	NBU 921-25D1BS Current Entity Number New Entity Number Spud Da	NBU 921-25D1BS Current Entity Number New Entity Number Spud Date	NBU 921-25D1BS Current Entity Number New Entity Number New Entity Number Spud Date Ent

MIRU PETE MARTIN BUCKET RIG. WSMVD SPUD WELL LOCATION ON 01/12/2011 AT 08:30 HRS.

BHL NWNW

Well 2

API Number	Well	Name	QQ	Sec	Twp	Rng	County
4304751239	NBU 921-25C1AS		NWNW	25	98	21E	UINTAH
Action Code	Current Entity Number	New Entity Number	s	pud Da	te		ty Assignment fective Date
\mathcal{B}	99999	2900	1	/13/201	1	1/	26/2011
Comments:		11				<u>''/'</u>	Sujacii

MIRU PETE MARTIN BUCKET RIG. WSM VD SPUD WELL LOCATION ON 01/13/2011 AT 10:30 HRS.

BHL= NENW

Well 3

API Number	Well Name		QQ	Sec	Twp	Rng	County
Action Code	Current Entity Number	New Entity Number	Spud Date		l te		ty Assignment fective Date
Comments:							

ACTION CODES:

- A Establish new entity for new well (single well only)
- B Add new well to existing entity (group or unit well)
- C Re-assign well from one existing entity to another existing entity
- D Re-assign well from one existing entity to a new entity
- E Other (Explain in 'comments' section)

Name (Please Print)

GINA BECKER

Signature

REGULATORY ANALYST

1/14/2011

Title

Date

JAN 1 8 2011

RECEIVED

	STATE OF UTAH					
	DEPARTMENT OF NATURAL RESOURCE DIVISION OF OIL, GAS, AND MIN		5.LEASE DESIGNATION AND SERIAL NUMBER: UO 1189 ST			
	RY NOTICES AND REPORTS		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:			
Do not use this form for proposition—hole depth, reenter plu DRILL form for such proposals.	7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES					
1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: NBU 921-25D1BS					
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONS	HORE, L.P.		9. API NUMBER: 43047512400000			
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4. LOCATION OF WELL FOOTAGES AT SURFACE: 0807 FNL 0885 FWL			COUNTY: UINTAH			
QTR/QTR, SECTION, TOWNSHI Qtr/Qtr: NWNW Section: 2!	IP, RANGE, MERIDIAN: 5 Township: 09.0S Range: 21.0E Meridian:	S	STATE: UTAH			
11. CHE	CK APPROPRIATE BOXES TO INDICAT	E NATURE OF NOTICE, REPORT,	OR OTHER DATA			
TYPE OF SUBMISSION		TYPE OF ACTION				
	☐ ACIDIZE	ALTER CASING	CASING REPAIR			
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME			
SUBSEQUENT REPORT	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE			
Date of Work Completion:	L DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION			
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK			
SPUD REPORT Date of Spud:	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION			
	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL VENT OR FLARE	□ TEMPORARY ABANDON □ WATER DISPOSAL			
✓ DRILLING REPORT	☐ TUBING REPAIR ☐ WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION			
Report Date: 1/28/2011			_			
	☐ WILDCAT WELL DETERMINATION	OTHER	OTHER:			
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. MIRU PROPETRO AIR RIG #12 ON JANUARY 26, 2011. DRILLED 11" SURFACE HOLE TO 2510'. RAN 8 5/8" 28# IJ-55 SURFACE CSG. PUMP 30 BBLS FRES Accepted by the WATER. PUMP 20 BBLS GEL WATER. LEAD CEMENT W/ 210 SX CLASS G PRE Vitah Division of @ 11.0 PPG, 3.82 YD. TAILED CEMENT W/ 170 SX CLASS G PREM LITE @ 51 8 Gas and Mining PPG, 1.15 YD. DROP PLUG ON THE FLY, DISPLACED W/ 147 BBLS WATER RECORD COINLY HELD. TRACE OF LEAD TO SURFACE; CEMENT FELL BACK. TOP OUT W/ 100 SX CLASS G PREM LITE @ 15.8 PPG, 1.15 YD. DOWN 1". CEMENT FELL. WOC. PUMPED 100 SX SAME CEMENT DOWN BACK SIDE, CEMENT STAYED AT SURFACE. WORT.						
Andy Lytle	720 929-6100	TITLE Regulatory Analyst				
SIGNATURE N/A		DATE 1/31/2011				

State of Utah - Notification Form

Well Name/Number NBU 921-25D1BS	
Qtr/Qtr NW/NW Section 25 Township 9S Range 21E Lease Serial Number 00 118957 API Number 4304751240000	
<u>Casing</u> – Time casing run starts, not cementing times.	
Other	ECEIVED
Date/Time AM	FOIL, GAS & MINING
BOPE Initial BOPE test at surface casing point Other	
Date/Time <u>7/5/11</u> <u>17:00</u> AM ☐ PM ⊠	
Rig Move Location To:	
Date/Time AM PM	
Remarks	·

Sundry Number: 16723 API Well Number: 43047512400000

STATE OF UTAH			FORM 9	
DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		5.LEASE DESIGNATION AND SERIAL NUMBER: UO 1189 ST		
SUNDRY NOTICES AND REPORTS ON WELLS		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:		
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES		
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 921-25D1BS	
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.			9. API NUMBER: 43047512400000	
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779 720 929-6515 Ext			9. FIELD and POOL or WILDCAT: NATURAL BUTTES	
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0807 FNL 0885 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNW Section: 25 Township: 09.0S Range: 21.0E Meridian: S			COUNTY: UINTAH	
			STATE: UTAH	
CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA				
TYPE OF SUBMISSION	TYPE OF ACTION			
MIRU ROTARY RIG. 2011. RAN 4-1/2": 11.6# P110 CSG FR RELEASED ENSIGN CEMENT JOB WILL	CHANGE TO PREVIOUS PLANS CHANGE WELL STATUS DEEPEN OPERATOR CHANGE PRODUCTION START OR RESUME REPERFORATE CURRENT FORMATION TUBING REPAIR WATER SHUTOFF WILDCAT WELL DETERMINATION FINISHED DRILLING FROM 2510 11.6# I-80 PRODUCTION CASING ROM 9626' TO 9808'. CEMENTED RIG 146 ON JULY 13, 2011 @ 2 BE INCLUDED WITH THE WELL WAITING ON FINAL COMPLETION	ent details including dates, depths, v 0' TO 9819' ON JULY 12, NG TO 9626'. RAN 4 ½" D PRODUCTION CASING 23:59 HRS. DETAILS OF COMPLETION REPOR DI	accepted by the Utah Division of	
NAME (PLEASE PRINT) Andy Lytle	PHONE NUMBER 720 929-6100	TITLE Regulatory Analyst		
SIGNATURE N/A		DATE 7/14/2011		

Sundry Number: 28648 API Well Number: 43047512400000

			FORM		
	STATE OF UTAH		FORM 9		
DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		5.LEASE DESIGNATION AND SERIAL NUMBER: UO 1189 ST			
SUNDRY NOTICES AND REPORTS ON WELLS		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:			
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES			
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 921-25D1BS		
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.		9. API NUMBER: 43047512400000			
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779 720 929-6			9. FIELD and POOL or WILDCAT: 65MATURAL BUTTES		
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0807 FNL 0885 FWL		COUNTY: UINTAH			
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNW Section: 25 Township: 09.0S Range: 21.0E Meridian: S		STATE: UTAH			
11. CHEC	K APPROPRIATE BOXES TO INDICAT	TE NATURE OF NOTICE, REPOR	RT, OR OTHER DATA		
TYPE OF SUBMISSION	TYPE OF ACTION				
	ACIDIZE	ALTER CASING	CASING REPAIR		
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME		
	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE		
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION		
	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK		
SPUD REPORT	✓ PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION		
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON		
	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL		
✓ DRILLING REPORT Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION		
4/16/2012	WILDCAT WELL DETERMINATION	OTHER	OTHER:		
			· <u> </u>		
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. THE SUBJECT WELL WAS PLACED ON PRODUCTION ON 04/16/2012. THE CHRONOLOGICAL WELL HISTORY WILL BE SUBMITTED WITH THE WELL COMPLETION REPORT. Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY August 07, 2012					
NAME (PLEASE PRINT) Cara Mahler	PHONE NUMB 720 929-6029	ER TITLE Regulatory Analyst I			
SIGNATURE N/A		DATE 8/6/2012			

STATE OF UTAH

		,		ST/ TMENT	ATE C			UDOE						D REPO		FORM 8	
				ON OF										changes SIGNATIO		ERIAL NUMBER:	
:					,								UO 1	189 ST			
WEL	L COM	PLET	ION	OR R	ECO	MPL	ETIC	N RI	EPOR	TAND	LOG	6.	FINDIAN	, ALLOTTE	E OR TRI	BE NAME	
1a. TYPE OF WELL	:	OIL WE		G. W	AS Z]	DRY		OTHE	R		7.		A AGREEM		AE	_
b. TYPE OF WOR! NEW WELL	C: HORIZ. LATS.	DE EN	EP-	R	TRY []	DIFF. RESVR.		OTHE	:R				ME and NU 921-25			_
2. NAME OF OPERA		_ & GA	S ON	SHOR	E, L.P		***************************************					9. /	43047	BER: 751240)		-
3. ADDRESS OF OF P.O.BOX 17		Ci	τγ DE	NVER		STATE	co	ZIP 802	217		NUMBER:			D POOL, O			
4. LOCATION OF W	-											11.	QTR/QTI	R, SECTION	N, TOWN	SHIP, RANGE,	
AT SURFACE:	NWNW	807 FN	IL 885	FWL	S25,T	98,R	21E						WNW			21E S	
AT TOP PRODU	AT TOP PRODUCING INTERVAL REPORTED BELOW: NWNW 54 FNL 704 FWL S25,T9S,R21E																
AT TOTAL DEPT	AT TOTAL DEPTH: NWNW 59 FNL 727 FWL S25,T95,R21E BHL by HSM													ΛΗ		13. STATE UTAH	1
14. DATE SPUDDEI 1/12/2011	1	5. DATE T.I 7/12/2		HED:	16. DATE	COMPL			ABANDONE	:D [READY TO PRO	DUCE [7]		VATIONS		, RT, GL):	
18. TOTAL DEPTH:				9. PLUGE							OMPLETIONS, HO		 	941 GL			-
	TVD 9.7		ľ	. , 200 2	, .O. (D		9,762 9,665		20, IF N	OLTIPLE CO	JMIPLETIONS, FI	JVV NIANT?		LUG SET:	TVE		
22. TYPE ELECTRIC			ICAL LOG	S RUN (S	ubmit cop				1	23.			<u>L</u>		100		
HDIL/ZDL/C				•		•	•	<u>.</u>		WAS WEL	L CORED?	NC	Z	YES [(Subi	mit analysis)	
I IDILIZDE/C	X)L/G/N	COLL	ANGH	×	FROL	LOG	,		WAS DST	RUN?		V	YES	(Subr	mit report)	
									·····	DIRECTIO	NAL SURVEY?	NC		YES 🗸	(Subr	mit copy)	-
24. CASING AND L	NER RECORI	(Report a	ıll stringa	set in wel	1)												
HOLE SIZE	SIZE/GRA	DE '	WEIGHT		TOP (I	MD)	вотто	M (MD)		EMENTER :	NO. OF SACK		JRRY ME (BBL)	CEMEN	IT TOP **	AMOUNT PULLE	D
20"	14"	STL	36.7		0		4	0				28					
11"	8 5/8"	IJ-55	287		0		2,4	195			5	80			0		
7 7/8"	4 1/2"	I-80	11.6	3#	0			326			1,6	18		5	50		
7 7/8"	4 1/2" P	-110	11.6	3#	9,6	26	9,8	03									
																	_
25. TUBING RECOR	RD CO																
SIZE	DEPTH S	ET (MD)	PACK	R SET (M	D)	SIZE		DEPTH	SET (MD)	PACKE	R SET (MD)	SIZE		DEPTH SE	r (MD)	PACKER SET (MD)
2 3/8"	9,2	25	<u> </u>														
26. PRODUCING IN	TERVALS									27. PERFO	RATION RECOR)					
FORMATION	······	TOP (BOTTON		TOP	(TVD)	вотто	M (TVD)	INTERVA	L (Top/Bot - MD)	SIZE	NO. HO	LES	PERFOR	RATION STATUS	_
(A) MESAVE	RDE	7,6	46	9,7	22					7,646	9,72	2 0.36	16	2 Оре	n Z	Squeezed	
(B)	· · · · · · · · · · · · · · · · · · ·													Ope	n 🗌	Squeezed	
(C)														Ope	n 🔲	Squeezed	
(D)														Оре	-	Squeezed	
28. ACID, FRACTUI	RE, TREATME	NT, CEME	NT SQUE	EZE, ETC.										RECE	IVE)	
DEPTH	INTERVAL								AMC	UNT AND T	YPE OF MATERI	AL.					
7646-9722			PUM	IP 10,7	'35 B	BLS S	SLICK	H2O	& 218,7	700 LBS	30/50 OT	TAWA S	SAND	IIN Z	<u>0 ZU</u>	11Z	
-			7 ST	AGES											0	AAINING	
													VIQ	OF OIL,	GAS &	AMILIA III	
29. ENCLOSED AT	TACHMENTS:															L STATUS:	_
=	RICAL/MECHA			CEMENT \	/ERIFICA	TION		GEOLOGI CORE AN	C REPORT	_	DST REPORT	✓ DIREC	CTIONAL	SURVEY		PROD	
															L		

31. INITIAL PRO	DDUCTION			INT	TERVAL A (As sho	wn in item #26)				
DATE FIRST PR 4/17/2012		TEST DATE: 5/1/2012		HOURS TESTE	D: 24	TEST PRODUCTION RATES: →	OIL – BBL:	GAS - MCF: 2,259	WATER - BBL: 282	PROD. METHOD:
CHOKE SIZE: 20/64	TBG. PRESS. 1,211	CSG. PRESS. 1,743	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL - BBL:	GAS - MCF: 2,259	WATER - BBL: 282	INTERVAL STATU
				IN'	TERVAL B (As sho	wn in item #26)				-1
DATE FIRST PR	ODUCED:	TEST DATE:		HOURS TESTE	D:	TEST PRODUCTION RATES: →	OIL - BBL:	GAS - MCF:	WATER - BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL BBL:	GAS - MCF:	WATER - BBL:	INTERVAL STATU
				INI	TERVAL C (As sho	wn in item #26)	<u> </u>			<u></u>
DATE FIRST PR	ODUCED:	TEST DATE:		HOURS TESTE	D:	TEST PRODUCTION RATES: →	OIL - BBL:	GAS - MCF:	WATER - BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS - MCF:	WATER - BBL:	INTERVAL STATUS
			·····	IN1	TERVAL D (As sho	wn in item #26)	.		<u> </u>	<u>. L., </u>
DATE FIRST PR	ODUCED:	TEST DATE:		HOURS TESTE	D:	TEST PRODUCTION RATES: →	OIL BBL:	GAS MCF:	WATER BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL - BBL:	GAS - MCF:	WATER - BBL:	INTERVAL STATUS
32. DISPOSITIO	N OF GAS (Sol	d, Used for Fuel, \	ented, Etc.)		···	<u></u>	<u> </u>		1	<u> </u>
33. SUMMARY	OF POROUS ZO	NES (include Aqu	lfers):			3	. FORMATION	(Log) MARKERS:		
Show all importa- tested, cushion u	nt zones of poro sed, time tool op	sity and contents the en, flowing and sh	ereof: Cored inten ut-in pressures and	vals and all drill-sten I recoveries.	m tests, including de	pth interval				
Formatio	on		Sottom (MD)	Descrip	otions, Contents, etc	;,		Name	(Top Measured Depth)
						E N \	GREEN RI BIRD'S NE MAHOGAN WASATCH MESAVER	ST NY H		1,600 1,903 2,290 4,868 7,630

Attached is the chronological well history, perforation report & final survey. The rig release submitted 7/14/11 showed a TD of 9819', the TD should have been 9818'.

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records.

NAME (PLEASE PRINT) CARA MAHLER

TITLE REGULATORY ANALYST

SIGNATURE

DATE 6/25/20/2

This report must be submitted within 30 days of

- completing or plugging a new well
- drilling horizontal laterals from an existing well bore
- recompleting to a different producing formation
- · reentering a previously plugged and abandoned well
- significantly deepening an existing well bore below the previous bottom-hole depth
- drilling hydrocarbon exploratory holes, such as core samples and stratigraphic tests

* ITEM 20: Show the number of completions if production is measured separately from two or more formations.

** ITEM 24: Cement Top -- Show how reported top(s) of cement were determined (circulated (CIR), calculated (CAL), cement bond log (CBL), temperature survey (TS)).

Send to:

Utah Division of Oil, Gas and Mining 1594 West North Temple, Suite 1210

Box 145801 Salt Lake City, Utah 84114-5801 Phone: 801-538-5340

Fax: 801-359-3940

(5/2000)

Operation Summary Report

Spud Conductor: 1/12/2011 Spud Date: 1/26/2011 Well: NBU 921-25D1BS BLUE Project: UTAH-UINTAH Site: NBU 921-25D PAD Rig Name No: ENSIGN 146/146, PROPETRO/ Event: DRILLING End Date: 7/13/2011 Start Date: 1/13/2011

tive Datum: R vel)	KB @4,9	55.00usft (a	bove Mean S	ea	UWI: N\	N/NW /0/9	9/S/21/E/25/0/0/26/PM/N/8	07/W/0/885/0/0
Date	이 집안 경험하고 있다.	Time art-End	Duration (hr)	Phase	Code	Sub Code	P/U MD From (usft)	Operation
1/26/2011	4:00	- 4:30	0.50	MIRU	01	A	Р	DRESS TOP OF CONDUCTOR. INSTALL DIVERTER HEAD AND BOWIE LINE, BUILD DITCH. MOVE RIG OVER HOLE AND RIG UP. RIG UP AND PRIME PIT PUMP AND MUD PUMP.
	4:30	- 5:00	0.50	PRPSPD	01	В	P	P/U 1.83 DEG BENT HOUSING HUNTING MTR SN 8017 . 7/8 LOBE .19 RPM. M/U Q506 SN 7023548 1ST RUN, W/ 7-18'S. INSTALL RUBBER
	5:00 6:30	- 6:30 - 7:00	1,50 0.50	DRLSUR	02 06	A A	P P	SPUD SURFACE 1/26/2011 05:00 HRS. DRILL 11" SURFACE HOLE F/40'-210' (170' @ 113'/HR) PSI ON/ OFF 700/430, UP/ DOWN/ ROT 27/22/25. 500 GPM, 45 RPM ON TOP DRIVE, 15-18K TOOH, TO PU AND ORIENT DIR TOOLS
	7:00	- 21:00	14.00	MAINT	08	A	X	WORK ON POWER HEAD (TOPDRIVE) & PACKING
		- 21:30	0.50	DRLSUR	06	A	P	TIH W/ DIR TOOLS T/210'
	21:30	- 0:00	2.50	DRLSUR	02	С	P	DRILL/ SLIDE 11" SURFACE HOLE F/ 210'-500' (290' @ 116'/HR) PSI ON/ OFF 590/870, UP/ DOWN/ ROT 51/46/47. 134 SPM, 550 GPM, 18-20K WOB, 50 RPM ON TOP DRIVE, CIRCULATING RESERVE PIT
1/27/2011	0:00	- 22:00	22.00	DRLSUR	02	С	P .	DRILL/ SLIDE 11" SURFACE HOLE F/ 500'-2510' (2010' @ 91'/HR) PSI ON/ OFF 1520/1220, UP/ DOWN/ ROT 82/65/72. 134 SPM, 550 GPM, 18-20K WOB, 50 RPM ON TOP DRIVE, CIRCULATING RESERVE PIT
	22:00	- 23:00	1.00	DRLSUR	05	F	Р	CIRC AND COND HOLE CLEAN
	23:00	- 0:00	1.00	DRLSUR	06	Α	P	TOOH, LDDS AND DIR BHA
1/28/2011	0:00	- 3:30	3.50	DRLSUR	06	Α	Р	LDDS AND DIR BHA
	3:30	- 4:00	0.50	CSG	12	Α	Р	RIG UP TO RUN 8.625" 28# SURFACE CSG, MOVE COLLAR TLR, MOVE CSG OVER TO WORK AREA
	4:00	- 8:00	4.00	CSG	12	С	P .	RUN 56 JTS OF 8-5/8", 28#, J-55, 8 RND SURFACE CSG W/ LTC THREADS. LANDED FLOAT SHOE @ 2484.93' KB. RAN BAFFLE PLATE IN TOP OF SHOE JT LANDED 2438.75' KB. FILL CSG @ 500', 1500', AND 2480'. RUN 100' OF ONE INCH DOWN BACK SIDE

Vell: NBU 921-2	25D1BS BLUE		Spud Cor	nductor: 1	/12/2011		Spud Date: 1/26	5/2011			
roject: UTAH-U	JINTAH		Site: NBU	921-25D	PAD			Rig Name No: ENSIGN 146/146, PROPETRO/			
vent: DRILLING	3		Start Date	e: 1/13/20	11			End Date: 7/13/2011			
	KB @4,955.00usfl	(above Mean S	ea	UWI: N	N/NW/0/9	/S/21/E/2	25/0/0/26/PM/N/80	'/W/0/885/0/0			
evel) Date	Time	T &	Phase	Code	Sub	P/U	MD From	Operation			
Delic	Start-End	Duration (hr)	i nasc	Jour	Code		(usft)	Operation			
	8:00 - 13:30	5.50	CSG	12	В	P	-	HOLD SAFETY MEETING, INSTALL CEMENT HEAD. PSI TEST TO 2000 PSI. PUMP 30 BBLS OF 8.3# H20 AHEAD. FULL CIRC. PUMP 20 BBLS OF 8.4# GEL WATER AHEAD. FULL CIRC. PUMP 210 SX(143 BBLS) 11# 3.82 YIELD LEAD CEMENT, PUMP 170 SX 35 BBLS) OF 15.8# 1.15 YIELD TAIL(2% CALC, 1/4# /SK OF FLOCELE). FULL CIRC. DROP PLUG ON FLY AND DISPLACE W/ 147 BBLS OF 8.3# H20. LIFT PRESSURE WAS 550 PSI, BUMP PLUG AND HOLD 850 PSI FOR 5 MIN. FLOAT HELD, TRACE OF LEAD CEMENT TO SURF, CEMENT FELL BACK, TOP OUT, PUMP 100 SX (20.5 BBLS) OF 15.8# 1.15 YIELD TAIL(4 % CALC, 1/4# /SK OF FLOCELE) DOWN 1". CMT FELL. WAITED TWO HRS, PUMPED 100 SX DOWN BACK SIDE, CMT STAYED AT SURFACE, RIG DOWN CEMENTERS AND RELEASE RIG @ 13:30			
7/5/2011	15:00 - 17:00	2.00	MIRU	01.	С	Р		RDRT - SKID RIG BACK 10' - RURT			
	17:00 - 18:00	1.00	DRLPRO	14	Α	Р		N/UP BOPE			
	18:00 - 22:00	4.00	DRLPRO	15	Α	Р		TEST BOPE, RAMS, CHOKE, CHOKE LINE, MANUAL VALVES, FLOOR VALVES, HCR & IBOP 250 LOW 5000 HIGH, ANNULAR 250 LOW 2500 HIGH, CASING 1500			
	22:00 - 23:00		DRLPRO	80	В	Р		IBOP TEST FAILED - REMOVE & REPLACE IBOP			
	23:00 - 23:30		DRLPRO	15	Α	Р		TEST IBOP			
	23:30 - 0:00	0.50	DRLPRO	14	В	Р		SET WEARBUSHING			
7/6/2011	0:00 - 2:00	2.00	DRLPRO	09	Α	P		SLIP & CUT DRILL LINE			
	2:00 - 5:30 5:30 - 6:30	3.50 1.00	DRLPRO	06 07	A B	P P		P/UP BIT #1 Q506F, WEATHERFORD MM .21 RPG 1.80 deg BEND - SCRIBE & ORIENT SAME - RIH TO 2385' - TAG CEMENT @ 2385' CENTER & LEVEL DERRICK			
	6:30 - 7:30	1.00	DRLPRO	02	F	Р		DRILL CEMENT, FE & RATHOLE F/2385' TO 2520' -			
	1.00	1.00	DILLI ILO	02	•	•		INSTALL ROTATING HEAD			
	7:30 - 0:00	16.50	DRLPRO	02	D	P		DRILL & SLIDE F/ 2520 TO 4670 - 2150 FT. 130 FT. PER/HR. DRILLING W/ WATER, WOB 20, RPM 45, MMRPM 108, GPM 514, TQ. 7/10, SPM. 105, PSI ON/OFF BTM. 1800/1450, P/U 155K, S/O 127K, ROT. 141K			

6/21/2012 12:53:46PM

DRLPRO

DRLPRO

DRLPRO

DRLPRO

10.50

3.50

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02

22

02

07

0:00 - 10:30

10:30 - 14:00

14:00 - 15:00

15:00 - 15:30

7/7/2011

DRILL & SLIDE F/ 4670 TO 6020 - 1350 FT. 129 FT. PER/HR. DRILLING W/ WATER, WOB 20, RPM 45, MMRPM 108, GPM 514, TQ. 8/10, SPM 105, PSI ON/OFF BTM. 1800/1500, P/U 156K, S/O 140K, ROT.

LOST RETURNS @ 6015 FT. BEGAN MUD UP, & MIX LCM % TO 20 REGAINED RETURNS - LOST APPROX. 360 BBLS. TOTAL - 145 BBLS OF WHICH

DRILL F/ 6020 TO 6186 - 166 FT. 166 FT. PER/HR. MW. 9.8, VIS 30, LCM 20% WOB 20, RPM 45, MMRPM 99, GPM 470, TQ. 5/8, SPM 95, PSI ON/OFF

144K - ROT. 80% SLIDE 20%

WAS MUD

BTM. 1850/1600

RIG SERVICE

Operation Summary Report

Well: NBU 921-25D1BS BLUE Spud Conductor: 1/12/2011 Spud Date: 1/26/2011 Project: UTAH-UINTAH Site: NBU 921-25D PAD Rig Name No: ENSIGN 146/146, PROPETRO/ Event: DRILLING End Date: 7/13/2011 Start Date: 1/13/2011

Active Datum: F Level)	RKB @4,9	55.00usft (ab	ove Mean S	ea	UWI: N	W/NW/0/9	/S/21/E	/25/0/0/26/PM/N/807/W/0/885/0/0
Date		Time art-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From Operation (usft)
	15:30	- 0:00	8.50	DRLPRO	02	D	P	DRILL & SLIDE F/ 6186 TO 6753 - 567 FT. 67 FT. PER/HR. MW. 9.8, VIS 36, LCM 20%, WOB 20, RPM 45, MMRPM 103, GPM 490, TQ. 7/10, SPM 100, PSI ON/OFF BTM. 1850/1550, P/U 176K, S/O 157K, ROT. 161K - ROT. 92% SLIDE 8%
7/8/2011	0:00	- 15:00	15.00	DRLPRO	02	D	P	DRILL & SLIDE F/ 6753 TO 7388 - 635 FT. 42 FT. PER/HR. MW. 10, VIS. 37, LCM 20%, WOB 20, RPM 45, MMRPM 103, GPM 490, TQ. 8/11, SPM 100, PSI ON/OFF BTM. 2000/1750, P/U 185K, S/O 170K, ROT. 173K, ROT. 90% SLIDE 10%
	15:00	- 15:30	0.50	DRLPRO	07	Α	Р	RIG SERVICE
	15:30	- 0:00	8.50	DRLPRO	02	D	P	DRILL & SLIDE F/ 7388 TO 7750 - 362 FT. 43 FT. PER/HR. MW 10.1, VIS 40, LCM 20%, WOB 22, RPM 40, MMRPM 103, GPM 490, TQ. 8/12, SPM 100, PSI ON/OFF BTM. 2150/1850, P/U 217K, S/O 174K, ROT. 179K, ROT. 98% SLIDE 2%
7/9/2011	0:00	- 13:00	13.00	DRLPRO	02	D	P	DRILL & SLIDE F/ 7750 TO 8206 - 456 FT. 35 FT. PER/HR. MW. 10.3, VIS 39, LCM 20%, WOB 22, RPM 40, MMRPM 103, GPM 490, TQ. 9/12, SPM 100, PSI ON/OFF BTM. 2250/1950, P/U 210K, S/O 177K, ROT 180K - ROT. 93% SLIDE 7%
		- 13:30	0.50	DRLPRO	07	A	P	RIG SERVICE
	13:30	- 20:30	7.00	DRLPRO	06	Α	Р	TRIP OUT TO CHANGE OUT MOTOR & BIT, CHECKED MOTOR - MANDREL COMPRESSED 3/4" L/D MOTOR & BIT, CHANGED OUT MWD TOOL, CLEAN FLOOR
	20:30	- 0:00	3.50	DRLPRO	06	Α	P	P/U NEW MOTOR & BIT, SCRIBE TOOLS, INSTALL MWD TOOL, T.I.H FILL @ SHOE & EVERY 1000 FT. SO AS NOT TO PLUG DRILL STRING
7/10/2011	0:00 3:30	- 3:30 - 4:00	3.50 0.50	DRLPRO	06	A E	P P	FINISH TRIPPING IN - CIRC. THROUGH BIT EVERY 1000 FT. WASH & REAM F/ 7931 TO 8206
	4:00 14:00	- 14:00 - 14:30	10.00	DRLPRO	02	D	P	DRILL & SLIDE F/ 8206 TO 8753 - 547 FT. 55 FT. PER/HR. MW. 10.4, VIS 39, LCM 20%, WOB 20, RPM 40, MMRPM 78, GPM 490, TQ. 10/13, SPM 100, PSI ON/OFF BTM. 2400/2100 - P/U 211K, S/O 186K, ROT 197K, ROT. 95% SLIDE 5% RIG SERVICE
	14:30	- 0:00	9.50	DRLPRO	02	D	Р	DRILL F/ 8753 TO 9290 - 537 FT. 57 FT. PER/HR MW 10.4, VIS 40, LCM 15% WOB 20, RPM 40, MMRPM 78, GPM 490, TQ. 10/14, SPM 100, PSI ON/OFF BTM 2450/2150 - P/U 246K, S/O 183K, ROT 200K, ROT 100%
7/11/2011	0:00	- 5:00	5.00	DRLPRO	02	D	Р	DRILL F/ 9290 TO 9454 - 164 FT. 33 FT. PER/HR, MW. 11.4, VIS 39, LCM 12%, WOB 22, RPM 40, MMRPM 78, GPM 490, TQ. 10/13, SPM 100, PSI ON/OFF BTM. 2450/2150 - P/U 246K, S/O 183K, ROT 200K - ROT 100% - @ 9408 HAD 10 FT. FLARE @ BTMS. UP
	5:00	- 10:00	5.00	DRLPRO	22	G	X	LOST RETURNS @ 9454 FT. MIX LCM TO 30% STAGE OUT OF THE HOLE EVERY 5 STDS. TO REGAIN CIRC.
	10:00	- 10:30	0.50	DRLPRO	05	G	Р	REGAINED CIRC. @ 6450 FT. DISPLACED 30% LCM MUD THROUGH OUT ANNULUS - LOST TOTAL 350 BBLS.

6/21/2012 12:53:46PM

Operation Summary Report

 Well: NBU 921-25D1BS BLUE
 Spud Conductor: 1/12/2011
 Spud Date: 1/26/2011

 Project: UTAH-UINTAH
 Site: NBU 921-25D PAD
 Rig Name No: ENSIGN 146/146, PROPETRO/

 Event: DRILLING
 Start Date: 1/13/2011
 End Date: 7/13/2011

Active Datum: RKB @4,955.00usft (above Mean Sea

UWI: NW/NW/0/9/S/21/E/25/0/0/26/PM/N/807/W/0/885/0/0

Date	Time	Duration	Phase	Code	Sub	P/U	MD From	Operation
	Start-End	(hr)			Code		(usft)	
	10:30 - 14:30	4.00	DRLPRO	06	F	Р		STAGE BACK IN THE HOLE CIRC. EVERY 5 STDS. WASH TO BTM.
	14:30 - 15:00	0.50	DRLPRO	07	Α	P		RIG SERVICE
	15:00 - 0:00	9.00	DRLPRO	02	D	P		DRILL F/ 9454 TO 9679 - 225 FT. 25 FT. PER/HR, MV 11.8, VIS 37, LCM 35%, WOB 22, RPM 40, MMPRM. 63, GPM 393, TQ. 8/10, SPM 80, PSI ON/OFF BTM. 1800/1500 - P/U 232K, S/O 193K, ROT 195K - ROT 100% - TOT. LOSSES WHILE DRILLING 168 BBLS. (SEEPING)
/12/2011	0:00 - 7:00	7.00	DRLPRO	02	D	P .		DRILL F/ 9679 TO 9818 TD - 139 FT 20 FT. PER/HR. MW. 12, VIS 38, LCM 35%, WOB 22, RPM 40, MMRPM 67, GPM 417, TQ. 10/14, SPM 85, PSI ON/OFF BTM. 1800/1500 - P/U 232K, S/O 193K, ROT 195K
	7:00 - 17:30	10.50	DRLPRO	06	Е	Р		GET LAST SURVEY - WIPER TRIP TO SHOE - BREACIRC. EVERY 1000 FT. ON TRIP IN
	17:30 - 19:00	1.50	DRLPRO	05	С	Р		CIRC. 2 BTMS UP - 10 FT. FLARE AFTER WIPER TF
	19:00 - 0:00	5.00	DRLPRO	06	В	P		TRIP OUT FOR LOGS - 3700 FT. @ MID NIGHT
/13/2011	0:00 - 4:00	4.00	DRLPRO	06	В	Р		FINISH TRIPPING OUT FOR LOGS - L/D MOTOR &
	4:00 - 9:00	5.00	DRLPRO	11	D	Р		HELD SAFETY MEETING R/U & RUN OPEN HOLE LOGS - LOGGER TD 9817 FT LOGGING TOOLS QUIT WORKING @ 4900 FT. PULLED OUT & L/D TOOLS, R/D TRUCK
	9:00 - 9:30	0.50	DRLPRO	06	J	Р		RETRIEVE WEAR BUSHING
	9:30 - 19:00	9.50	DRLPRO	12	С	Р		HELD SAFETY MEETING W/ FRANKS - R/U & RAN 4 JTS. 4 1/2 P-110, 11.6# - 232 JTS. 4 1/2 I-80 11.6# BTC CASING, BREAKING CIRC. EVERY HR.TO CLEAR FLOATS. SHOE @ 9808 FT, FLOAT COLLAR @ 9761 FT, MESA MKR. @ 7645 FT, WASATCH MKR. @ 4921 FT
	19:00 - 20:00	1.00	DRLPRO	05	D	P		CIRC THROUGH CASING - NO FLARE @ BTMS. UP SHAKE LCM & SOLIDS FROM MUD
	20:00 - 22:30	2.50	DRLPRO	12	Е	P		HELD SAFETY MEETING W/ BAKER HUGHES - R/U PUMPED 5 BBL. SPACER, PUMPED 10 BBL. SCAVENGER CMT @ 11.2# LEAD W/ 507 SKS 196 BBLS, 12.2# 2.17 YIELD, TAIL W/ 1111 SKS. 259 BBLS. 14.3# 1.31 YIELD, BUMPED PLUG, FLOATS HELD, 2 BBLS. BACK TO TRUCK, 5 BBLS GOOD CMT. TO PIT, FINAL LIFT PSI 2345
	22:30 - 0:00	1.50	DRLPRO	14	Α	P .		SET SLIPS THROUGH BOP @ 105K W/ WEATHERFORD TECH, N/D BOP, ROUGH CUT CASING, RIG DOWN - CLEAN MUD TANKS - RELEASE RIG @ 00:00 HRS. 7-14-11

6/21/2012 12:53:46PM

1 General

1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

1.2 Well/Wellbore Information

Well	NBU 921-25D1BS BLUE	Wellbore No.	ОН	
Well Name	NBU 921-25D1BS	Wellbore Name	NBU 921-25D1BS	
Report No.	1	Report Date	3/15/2012	
Project	UTAH-UINTAH	Site	NBU 921-25D PAD	
Rig Name/No.		Event	COMPLETION	
Start Date	3/15/2012	End Date	5/22/2012	
Spud Date	1/26/2011	Active Datum	RKB @4,955.00usft (above Mean Sea Level)	
UWI	NW/NW/0/9/S/21/E/25/0/0/26/PM/N/807/W/0/88	15/0/0		

1.3 General

Contractor		Job Method	PERFORATE	Supervisor	
Perforated Assembly	PRODUCTION CASING		WIRELINE		

1.4 Initial Conditions

1.5 Summary

Fluid Type	KCL WATER	Fluid Density	Gross Interval	7,646.0 (usft)-9,722.0 (usft	Start Date/Time	4/2/2012	12:00AM
Surface Press		Estimate Res Press	No. of Intervals	32	End Date/Time	4/2/2012	12:00AM
TVD Fluid Top		Fluid Head	Total Shots	162	Net Perforation Interval		52.00 (usft)
Hydrostatic Press		Press Difference	Avg Shot Density	3.12 (shot/ft)	Final Surface Pressure		
Balance Cond	NEUTRAL				Final Press Date		

2 Intervals

2.1 Perforated Interval

Date Formation/ Reservoir	CCL@ CCL-T MD Top (usft) S (usft)	(usft)	Shot Density (shot/ft)	Misfires/ Diamete Carr Type /St Add. Shot r (in)	tage No Carr Phasing Charge Desc / C Size (*) Manufactu	To Table 1 Table 1
4/2/2012 MESAVERDE/	7,646.0	7,647.0	3.00	0.360 EXP/	3.375 120.00	23.00 PRODUCTIO
12:00AM						N

June 21, 2012 at 12:57 pm 1 OpenWells

2.1 Perforated Interval (Continued)

Date	Formation/	CCL@	CCL-T	MD Top	A STATE OF THE PARTY OF THE PARTY.	Shot	Misfires/	Diamete	Carr Type /Stage No	Carr	Phasing	Charge Desc/Charge	Charge	Reason	Misrun
	Reservoir	(usft)	S (usft)	(usft)	(usft)	Density (shot/ft)	Add. Shot	r (in)		Size (in)	(°)	Manufacturer	Weight (gram)		
4/2/2012	MESAVERDE/		\usit	7,702.0	7,706.0	3.00	BRY (BRANCH COLD)	0.360	EXP/	3.375	120.00	18. S. Lander (1998) (1998) (1998) (1998) (1998)	100	PRODUCTIO	A \$15 6 6 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
12:00AM														: N	
4/2/2012	MESAVERDE/			7,758.0	7,760.0	3.00		0.360	EXP/	3.375	120.00		23.0	PRODUCTIO	
12:00AM	MEO AVERDE			7 050 0	7.853.0	2.00		0.260	EXP/	3.375	120.00			N PRODUCTIO	
4/2/2012 12:00AM	MESAVERDE/			7,852.0	7,000.0	3.00		0.360	EAP)	3.373	120.00		23.00	N N	
4/2/2012	MESAVERDE/			7,961.0	7,963.0	3.00		0.360	EXP/	3.375	120.00		23.0	PRODUCTIO	
12:00AM	en de la companya de La companya de la co							: :						N	
4/2/2012	MESAVERDE/			7,982.0	7,984.0	3.00		0.360	EXP/	3.375	120.00		23.00	D PRODUCTIO N	
12:00AM 4/2/2012	MESAVERDE/			8,134.0	8,136.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	
12:00AM	WEGAVERDE			0,104.0	0,100.0	5.00		0.500		0.070	120.00		20.0	:N	
4/2/2012	MESAVERDE/			8,193.0	8,194.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	
12:00AM	****O *\ /FBBE/				0.005.0	2.00		0.200	EVD	2 275	420.00		22.0	N PRODUCTIO	
4/2/2012 12:00AM	MESAVERDE/			8,224.0	8,225.0	3.00		0.360	EXP/	3.375	120.00		23.00	N SEKODOCTIO	
4/2/2012	MESAVERDE/			8,237.0	8,238.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	
12:00AM										<u></u> .				N	
4/2/2012 12:00AM	MESAVERDE/			8,267.0	8,268.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
4/2/2012	MESAVERDE/			8,356.0	8,358.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	
12:00AM	44504)/55057/		:		0.400.0	2.00		0.200	CVD	3.375	120.00		22.00	N PRODUCTIO	
4/2/2012 12:00AM	MESAVERDE/	:		8,418.0	8,420.0	3.00		0.360	EAF/	3.313	120.00		23.00	N	
4/2/2012	MESAVERDE/			8,615.0	8,616.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	1
12:00AM														N	
4/2/2012	MESAVERDE/			8,658.0	8,660.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	:
12:00AM	MEO AVEDDE				9 720 0	3.00		0.260		3.375	120.00		23 O	N PRODUCTIO	
4/2/2012 12:00AM	MESAVERDE/			8,729.0	8,730.0	3.00		0.360	EXP/	3,3/3	120.00		23.00	N	
4/2/2012	MESAVERDE/			8,739.0	8,740.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	
12:00AM														N	
4/2/2012	MESAVERDE/			8,780.0	8,782.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	
12:00AM	MED AVEDDE			0.004.0	0.000.0	2.00			EVD/	2 275	120.00		22.0	N PRODUCTIO	
4/2/2012 12:00AM	MESAVERDE/			8,801.0	8,802.0	3.00		0.360	EAPI	3.375	120.00		23.00	-N	
4/2/2012	MESAVERDE/			8,986.0	8,988.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	
12:00AM														.N	1
4/2/2012 12:00AM	MESAVERDE/			9,064.0	9,065.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	:
4/2/2012	MESAVERDE/			9,146.0	9,148.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	
12:00AM												e de de como de la compansa que la constitución		N	

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
4/2/2012 12:00AM	MESAVERDE/			9,208,0	9,210.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
4/2/2012 12:00AM	MESAVERDE/			9,223.0	9,224.0	3.00		0.360	EXP/	3.375	120.00			PRODUCTIO N	
4/2/2012 12:00AM	MESAVERDE/			9,262.0	9,264.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
4/2/2012 12:00AM	MESAVERDE/			9,345.0	9,347.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
4/2/2012 12:00AM	MESAVERDE/			9,377.0	9,378.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
4/2/2012 12:00AM	MESAVERDE/			9,384.0	9,385.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
4/2/2012 12:00AM	MESAVERDE/			9,470.0	9,472.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
4/2/2012 12:00AM	MESAVERDE/			9,628.0	9,630.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
4/2/2012 12:00AM	MESAVERDE/			9,667.0	9,669.0	4.00		0.360	EXP/	3.375	90.00			PRODUCTIO N	
4/2/2012 12:00AM	MESAVERDE/			9,720.0	9,722.0	4.00		0,360	EXP/	3.375	90,00		23.00	PRODUCTIO N	

3 Plots

3.1 Wellbore Schematic



Operation Summary Report

Well: NBU 921-25D1BS BLUE	Spud Conductor: 1/12/2011	Spud Date: 1/26/2011
Project: UTAH-UINTAH	Site: NBU 921-25D PAD	Rig Name No: MILES 3/3, MONUMENT/698
Event: COMPLETION	Start Date: 3/15/2012	End Date: 5/22/2012

Active Datum: RI Level)	KB @4,955.	00usft (ab	ove Mean Se	ea	UWI: NV	UWI: NW/NW/0/9/S/21/E/25/0/0/26/PM/N/807/W/0/885/0/0				
Date	Tin Start-	reflected and a	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation	
3/16/2012	10:45 -	12:30	1.75	COMP	33		Р		FILL SURFACE CSG. MIRU B&C QUICK TEST. PSI TEST T/ 1000 PSI. HELD FOR 15 MIN LOST 13 PSI. PSI TEST T/ 3500 PSI. HELD FOR 15 MIN LOST 28 PSI. 1ST PSI TEST T/ 7000 PSI. HELD FOR 30 MIN LOST 104 PSI. NO COMMUNICATION OR MIGRATION WITH SURFACE CSG BLEED OFF PSI. SWIFN	
3/29/2012	8:30 -	9:15	0.75	COMP	37	В	Р		PERF STG 1)PU 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH PERF AS PER D-FIT DESIGN. POOH.	
	9:15 -		0.75	COMP	33	G	P		RU LINES. PSI TEST LINES T/ 8000 PSI. GOOD TEST. BLEED OFF PSI. OPEN WELL = 42 PSI. 9:15 AM BEG PUMPING. BRK @ 5.3 BPM @ 4447 PSI. PUMP 5 BBL @ 5.3 BPM @ 3350 PSI. PUMP 10 BBL @ 5.3 BPM @ 3305 PSI. PUMP 15 BBLS @ 5.3 BPM @ 3250 PSI. PUMP 20 BBLS @ 5.3 BPM @ 3240 PSI. PUMP 20 BBLS @ 5.3 BPM @ 3220 PSI. SHUT DOWN PUMP. ISIP 2910 PSI, FG .72. 5 MIN PSI = 2690 10 MIN PSI = 2690 10 MIN PSI = 2585 20 MIN PSI = 2550 25 MIN PSI = 2521 30 MIN PSI = 2497 SWI @ 9:50 AM. CONT MONITORING W/ HALLIBURTON SURFACE GAUGES FOR 24 HRS.	
3/30/2012	10:00 -	15:00	5.00	COMP	37		P		REMOVED PRESSURE GUAGES PERF REMAINDER OF STG 1)PU 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH PERF AS PER PERF DESIGN. POOH. SWIFW	

						100	REGION			
				Opera	tion S	Summ	ary Report			
	25D1BS BLUE			nductor: 1		1	Spud Date: 1/2	26/2011		
roject: UTAH-I	UINTAH		Site: NBI	J 921-25D) PAD			Rig Name No: MILES 3/3, MONUMENT/698		
vent: COMPLI	ETION		Start Dat	e: 3/15/20	112			End Date: 5/22/2012		
ctive Datum: F	RKB @4,955.00usft (ab	ove Mean Se	a	UWI: NV	N/NW/ 0/	9/S/21/E	/25/0/0/26/PM/N/8	/807/W/0/885/0/0		
Date	Time	Duration	Phase	Code	Sub	P/U	MD From	Operation		
	Start-End	(hr)			Code	<u>L</u>	(usft)			
4/2/2012	10:00 - 18:00	8.00	COMP	36	В	P		FRAC STG 1)WHP 1963 PSI, BRK 3248 PSI @ 4.6		
								BPM. ISIP 2938 PSI, FG .74.		
								CALC HOLES OPEN @ 54.7 BPM @ 5299 PSI =		
								100% HOLES OPEN.(24/24 HOLE SIZE) ISIP 3010 PSI, FG .74, NPI 72 PSI.		
								MP 6212 PSI, MR 55.3 BPM, AP 5208 PSI, AR 50.4		
								BPM		
								PUMPED 30/50 OTTAWA SAND IN THIS STAGE		
								X-OVER FOR W L		
								PERF STG 2)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN		
								23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET		
								CBP @ 9522' P/U PERF AS PER DESIGN. POOH		
								FRAC STG 2)WHP 1804 PSI, BRK 3061 PSI @ 4.3		
								BPM. ISIP 2064 PSI, FG .65.		
								CALC HOLES OPEN @ 49 BPM @ 5023 PSI = 79%		
								HOLES OPEN. (19/24 HOLES OPEN)		
								ISIP 2953 PSI, FG .75, NPI 889 PSI.		
								MP 5432 PSI, MR 55 BPM, AP 4349 PSI, AR 47.3 BPI		
								PUMPED 30/50 OTTAWA SAND IN THIS STAGE X-OVER FOR W L		
								PERF D-FIT STG 3)PU 4 1/2 8K HAL CBP & 3 1/8		
								EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG		
								PHASING. RIH SET CBP @ 9254' P/U PERF AS PER		
								D-FIT DESIGN. POOH.		
								STG 3) # 3 D-FIT)OPEN WELL = 1861 PSI.		
								16:37 BEG PUMPING.		
								BRK @ 4.6 BPM @ 3052 PSI.		
								PUMP 5 BBL @ 4.6 BPM @ 2628 PSI.		
								PUMP 10 BBL @ 4.7 BPM @ 2658 PSI		
	1							PUMP 15 BBLS @ 4.7 BPM @ 2652 PSI.		
	·							PUMP 20 BBLS @ 4.7 BPM @ 2595 PSI.		
								PUMP 24 BBLS @ 4.7 BPM @ 2535 PSI.		
								16:44 SD		
								ISIP @ 2305 PSI, FG .69		
								5 MIN @ 2057 PSI.		
								10 MIN @ 2039 PSI.		
								15 MIN @ 2029 PSI.		
								20 MIN @ 2020 PSI.		
								25 MIN @ 2015 PSI.		
								30 MIN @ 2010 PSI.		
								17:14 SWI.		
								TOTAL BBLS PUMPED = 31 BBLS (COUNTING BRK		
								DWN.)		
								CONT D-FIT W/ HALLIBURTON SURFACE GAUGES		
								FOR 40 UPS		

FOR 12 HRS.

2

6/21/2012 12:58:40PM

Vell: NBU 921-2	25D1BS	BLUE		Spud Co	nductor: 1	1/12/2011		Spud Date: 1/26	5/2011		
roject: UTAH-L	INTAH			Site: NBU	921-25E	PAD			Rig Name No: MILES 3/3, MONUMENT/698		
vent: COMPLE	TION			Start Date	e: 3/15/20)12			End Date: 5/22/2012		
ctive Datum: R	KB @4,9	55.00usft (al	ove Mean Se	ea	UWI: N	W/NW/0/9	9/S/21/E/2	5/0/0/26/PM/N/80	7/W/0/885/0/0		
evel)					<u> </u>						
Date		Time tart-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation		
4/3/2012	11:00	- 18:00	7.00	COMP	36	В	P		FINISH PERF STG 3)PU 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH PERF AS PER DESIGN. POOH. X-OVER FOR FRAC CREW.		
									FRAC STG 3)WHP 2166 PSI, BRK 2400 PSI @ 4.4 BPM. ISIP 2191 PSI, FG .67.		
									CALC HOLES OPEN @ 47.4 BPM @ 4428 PSI = 96% HOLES OPEN.		
									(23/24 HOLES OPEN)		
									ISIP 2611 PSI, FG .72, NPI 420 PSI. MP 6644 PSI, MR 48.7 BPM, AP 4565 PSI, AR 47.9 BPM		
									PUMPED 30/50 SAND IN THIS STAGE X-OVER FOR W L		
									PERF D-FIT STG 4)PU 4 1/2 8K HAL CBP & 3 1/8 EXP		
									GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIF SET CBP @ 8852' P/U PERF AS PER D-FIT DESIGN.		
									POOH. X-OVER FOR FRAC CREW.		
									D-FIT STG 4)OPEN WELL = 1497 PSI.		
									14:16 BEG PUMPING.		
									BRK @ 4.6 BPM @ 3036 PSI.		
									PUMP 5 BBL @ 4.6 BPM @ 2690 PSI.		
									PUMP 10 BBL @ 4.6 BPM @ 2564 PSI		
									PUMP 15 BBLS @ 4.6 BPM @ 2531 PSI.		
									PUMP 20 BBLS @ 4.6 BPM @ 2477 PSI. PUMP 24 BBLS @ 4.6 BPM @ 2444 PSI.		
									14:22 SD		
									ISIP @ 2292 PSI. FG .70		
									5 MIN @ 1970 PSI.		
									10 MIN @ 1887 PSI.		
									15 MIN @ 1842 PSI.		
									20 MIN @ 1802 PSI.		
									25 MIN @ 1782 PSI.		
									30 MIN @ 1763 PSI.		
									14:52 SWI.		
									TOTAL BBLS PUMPED = 26 BBLS (COUNTING BRK		
									DWN.)		
									CONT D-FIT W/ HALLIBURTON SURFACE GAUGES FOR 12 HRS.		

12:58:40PM

						KIES RI Summa	EGION Iry Report			
Mar NOLLOGA	SEDARE DI LIE		Soud Co		<u> </u>		Spud Date: 1/2	6/2014		
Well: NBU 921-2 Project: UTAH-L				nductor: 1		· · · · · · · · · · · · · · · · · · ·	Spud Date. 1/2	Rig Name No: MILES 3/3, MONUMENT/698		
	 									
Event: COMPLE				e: 3/15/20		0101041510	5 (0 (0 (0 0 (0) 4 ()) (0)	End Date: 5/22/2012		
Active Datum: R Level)	KB @4,955.00usft (al	oove Mean Sea	a	UVVI: N	VV/NVV/U/	9/5/21/E/2	5/0/0/26/PM/N/8	307/144/0/003/0/0		
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation		
4/4/2012	8:00 - 18:00	10.00	COMP	36	В	Р		FINISH PERF STG 4)PU 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH PERF AS PER DESIGN. POOH.		
								FRAC STG 4)WHP 1595 PSI, BRK 2137 PSI @ 4.5 BPM. ISIP 2095 PSI, FG .67. CALC PERFS OPEN @ 51. BPM @ 3928 PSI = 100% HOLES OPEN. (24/24 HOLES OPEN) ISIP 2602 PSI, FG .73, NPI 510 PSI. MP 5142 PSI, MR 54.4 BPM, AP 4163 PSI, AR 52.6 BPM, PUMPED 30/50 OWATTA SAND. SWI, X-OVER FOR WL. PERF D-FIT STG 5)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 8470' P/U PERF AS D-FIT DESIGN. POOH. X-OVER FOR FRAC CREW.		
								D-FIT STG 5) OPEN WELL = 1266 PSI. 12:26 BEG PUMPING. BRK @ 4.7 BPM @ 3018 PSI. PUMP 5 BBL @ 4.6 BPM @ 2095 PSI. PUMP 10 BBL @ 4.6 BPM @ 2025 PSI. PUMP 15 BBLS @ 4.6 BPM @ 2025 PSI. PUMP 20 BBLS @ 4.6 BPM @ 2003 PSI. PUMP 24 BBLS @ 4.6 BPM @ 2004 PSI. 12:33 SD ISIP @ 1973 PSI. FG .67 5 MIN @ 1650 PSI. 10 MIN @ 1650 PSI. 15 MIN @ 1551 PSI. 20 MIN @ 1521 PSI. 25 MIN @ 1498 PSI. 30 MIN @ 1493 PSI. 13:03 SWI. TOTAL BBLS PUMPED = 26 BBLS (COUNTING BRK DWN.)		
								CONT D-FIT W HALLIBURTON SURFACE GAUGES		

FOR 12 HRS.

6/21/2012 12:58:40PM

Well: NBU 921-25D1BS BLUE		Spud Co	onductor: 1/12/2011 Spud Date: 1/26/2011								
Project: UTAH-UINTAH	S	ite: NBl	J 921-25D	PAD		Rig Name No: MILES 3/3, MONUMENT/698					
Event: COMPLETION	S	tart Dat	e: 3/15/20	12	End Date: 5/22/2012						
Active Datum: RKB @4,955.00usf Level)	t (above Mean Sea		UWI: NV	N/NW /0/9	/S/21/E/2	25/0/0/26/PM/N/8	07/W/0/885/0/0				
Date Time	1 2000101	hase	Code	Sub	P/U	MD From	Operation				
Start-End	(hr)			Code		(usft)	l series de la companya de la compa				
4/5/2012 7:15 - 18:00	0 10.75 C	OMP	36	В	Р		FINISH PERF STG 5)PU 3 1/8 EXP GUN, 23 GM, .36				

HOLE SIZE, 120 DEG PHASING, RIH SET CBP @ 8470' P/U PERF AS PER DESIGN. POOH.

FRAC STG 5)WHP 1059 PSI, BRK 2242 PSI @ 4.3 BPM. ISIP 1767 PSI, FG .65. CALC PERFS OPEN @ 51.2 BPM @ 4544 PSI = 83% HOLES OPEN. (20/24 HOLES OPEN) ISIP 2579 PSI, FG .74, NPI 992 PSI. MP 6565 PSI, MR 51.8 BPM, AP 4235 PSI, AR 50.6 PUMPED 30/50 OWATTA SAND. SWI, X-OVER FOR WL.

PERF STG 6)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE, 120 DEG PHASING, RIH SET CBP @ 8166' P/U PERF AS PER DESIGN. POOH. X-OVER FOR FRAC CREW.

FRAC STG 6)WHP 1198 PSI, BRK 4428 PSI @ 3.7 BPM. ISIP 2141 PSI, FG .70. CALC PERFS OPEN @ 51.5 BPM @ 4224 PSI = 100% HOLES OPEN. (24/24 HOLES OPEN) ISIP 2500 PSI, FG .75, NPI 359 PSI. MP 4277 PSI, MR 51.6 BPM, AP 4012 PSI, AR 50.9 PUMPED 30/50 OWATTA SAND. SWI, X-OVER FOR

PERF D-FIT STG 7)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 8166' P/U PERF AS PER D-FIT DESIGN. POOH. X-OVER FOR FRAC CREW.

WL.

D-FIT STG 7) OPEN WELL = 690 PSI. 11:46 BEG PUMPING. BRK @ 4.5 BPM @ 6415 PSI. PUMP 5 BBL @ 4.6 BPM @ 2075 PSI. PUMP 10 BBL @ 4.6 BPM @ 2074 PSI PUMP 15 BBLS @ 4.6 BPM @ 2032 PSI. PUMP 20 BBLS @ 4.6 BPM @ 1994 PSI. PUMP 24 BBLS @ 4.6 BPM @ 1973 PSI. 11:53 SD ISIP @ 1459 PSI. FG .62 5 MIN @ 1147 PSI. 10 MIN @ 1079 PSI. 15 MIN @ 1024 PSI. 20 MIN @ 992 PSI. 25 MIN @ 971 PSI. 30 MIN @ 950 PSI.

12:27 SWI. TOTAL BBLS PUMPED = 31 BBLS (COUNTING BRK DWN.)

CONT D-FIT W/ HALLIBURTON SURFACE GAUGES

					ับ	S ROC	KIES R	EGION			
					Opera	ition S	Summ	ry Report			
Vell: NBU 921-	25D1BS E	BLUE		Spud Co	nductor:	1/12/2011	l	Spud Date: 1/26/2011			
Project: UTAH-I	JINTAH	•		Site: NB	J 921-25[PAD		Rig Name No: MILES 3/3, MONUMENT/698			
vent: COMPLI	ETION			Start Dat	e: 3/15/20)12		End Date: 5/22/2012			
Active Datum: F Level)	RKB @4,9	55.00usft (a	bove Mean S	ea	UWI: N	W/NW/0/	9/S/21/E/	5/0/0/26/PM/N/807/W/0/885/0/0			
Date	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Time art-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From Operation (usft)			
<u> </u>			1 1 1				100000000000000000000000000000000000000	FOR 12 HRS.			
4/6/2012	7:00	- 18:00	11.00	COMP	36	В	Р	FINISH PERF STG 7)PU 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH PERF AS PER DESIGN. POOH. X-OVER FOR FRAC CREW.			
								FRAC STG 7)WHP 589 PSI, BRK 4440 PSI @ 4.6 BPM. ISIP 1823 PSI, FG .67. CALC PERFS OPEN @ 59.3 BPM @ 3976 PSI = 889			
								HÖLES OPEN. (21/24 HOLES OPEN)			
								ISIP 2153 PSI, FG .71, NPI 330 PSI.			
								MP 5631 PSI, MR 59.4 BPM, AP 4006 PSI, AR 59 BPM,			
								PUMPED 30/50 OWATTA SAND. SWI, X-OVER FOR WL.			
								PU 4 1/2 8K HAL CBP. RIH SET KILL PLUG @ 7596' POOH. DONE FRACING THIS WELL.			
								TOTAL SAND = 218,700 LBS TOTAL CLFL = 10,735 BBL			
4/13/2012	11:00	- 12:00	1.00	COMP	30	Α	Р	MOVE OVER FROM 25C1AS. SPOT AND RUSU. NE WH. NU BOP. RU FLOOR, SPOT TBG.			
	12:00	- 17:00	5.00	COMP	31	ſ	Р	MU 3-7/8" BIT, POBS AND 1.87" XN. RIH AS MEAS AND PU 2-3/8" L-80 TBG. HAVE 208-JTS IN, EOT A			
4/16/2012	7:00	- 7:15	0.25	COMP	48		Р	6588. (REPLACED STARTER IN RIG N/C 1 HR) SDF JSA- RU PWR SWIVEL. D/O PLUGS.			

6/21/2012 12:58:40PM

6

Well: NBU 921-2	5D1BS F	BLUE		Spud Conductor: 1/12/2011 Spud Date: 1/2					26/2011		
Project: UTAH-U		`		Site: NBL					Rig Name No: MILES 3/3, MONUMENT/698		
Event: COMPLE				Start Date				·	End Date: 5/22/2012		
Active Datum: RI		55.00usft (ab	ove Mean Se				/9/S/21/E	25/0/0/26/PM/N/8			
_evel)	C (4.57			DL		1 2	na.		→		
Date	Tarana Sanas	Time tart-End	Duration (hr)	Phase	Code	Sub	P/U	MD From (usft)	Operation		
	Programme 1	- 13:00	5.75	COMP	44	С	Р	1.3.7	SITP 0, SICP 0. CONT RIH W/ POBS AND BIT AS		
									MEAS AND PU 2-3/8" L-80 TBG. TAG AT 7605' W/		
									240-JTS IN. RU DRLG EQUIP. FILL TBG AND PRES		
									TEST TO 3000#. EST CIRC AND D/O 7 PLUGS.		
									#1- C/O 15' SAND TO CBP AT 7620'. D/O IN 4 MIN.		
									600# INC. 0-200# FCP. RIH.		
									#2- C/O 45' SAND TO CBP AT 7815'. D/O IN 3 MIN.		
									400# INC. 200-500# FCP. RIH.		
									#3- C/O 20' SAND TO CBP AT 8166', D/O IN 3 MIN. 500# INC. 400-600# FCP. RIH.		
									#4- C/O 65' SAND TO CBP AT 8500', D/O IN 3 MIN.		
									500# INC. 400-800# FCP. RIH.		
									#5- C/O 55' SAND TO CBP AT 8870'. D/O IN 5 MIN.		
									400# INC. 400-1300# FCP. RIH.		
									#6- C/O 25' SAND TO CBP AT 9252'. D/O IN 3 MIN.		
									500# INC. 700-900# FCP. RIH. #7- C/O 40' SAND TO CBP AT 9522'. D/O IN 5 MIN.		
									600# INC. 700-800# FCP. RIH.		
									PBTD AT 9760'. BTM PERF AT 9232'. C/O 12' SAND		
									TO 9760' W/ 309-JTS IN, (38' RATHOLE). CIRC		
									CLEAN.		
									RD PWR SWIVEL. POOH AS LD 18-JTS TBG. PU 4"		
									10K HANGER. LUB IN AND LAND 291-JTS 2-3/8"		
									L-80 TBG W/ EOT AT 9224.56'. RD FLOOR. ND BOP.		
									NU WH. HOOK FLOW EQUIP. POBS AT 2000#. PRES		
									TEST LINES TO 3000#. SITP 950#, SICP 2200#. TURN OVER TO FBC AND SALES. RDSU.		
									OVER TO FBO AND GALLO. NEGO.		
									TBG DETAIL KB 14.00		
									4" 10K HANGER .83		
		Ÿ							291-JTS 2-3/8" L-80 9207.53 1.87" XN POBS 2.20		
									EOT 9224.56		
									314-JTS DELIVERED, 30 JTS IN TRANSFERED FROM		
									25C1AS. 53-JTS TRANSFERED TO 25D1CS.		
4/47/0040		_							TLTR 10,735, TLR 1200, LLTR 9535.		
4/17/2012 5/1/2012	7:00	-			50				WELL ID'D ON 5/1/2012 2250 MCED 0 DODD 202		
JI 1120 12	7.00				50				WELL IP'D ON 5/1/2012 - 2259 MCFD, 0 BOPD, 282 BWPD, CP 1743#, FTP 1211#, CK 20/64, LP 98#, 24 HRS		
5/14/2012	7:00	- 8:00	1.00	СОМР	30	G	Р		ROAD RIG F/ 921-25C PAD TO NBU 921-25D PAD.		
	8:00	- 8:30	0.50	COMP	48		Р		HSM, REVIEW RIGGING UP.		
	8:30	- 9:30	1.00	СОМР	30	Α	Р		SPOT RIG & EQUIPMENT, MIRU.		
	9:30	- 10:15	0.75	COMP	30	F	Р		FCP. 1300 PSI, FTP. 800 PSI, BLEW TBG DWN,		
									CONTROL TBG W/ 10 BBLS, ND WH, NU BOP'S, RU		
									FLOOR & TBG EQUIPMENT.		

6/21/2012 12:58:40PM

				Oheis	uun 3	ummary Repo	Л
Well: NBU 921-	25D1BS BLUE		Spud Co	nductor: 1	/12/2011	Spud Date	e: 1/26/2011
Project: UTAH-	UINTAH		Site: NBI	J 921-25	PAD		Rig Name No: MILES 3/3, MONUMENT/698
Event: COMPL	ETION		Start Dat	e: 3/15/20	112		End Date: 5/22/2012
	RKB @4,955.00usft (a	bove Mean Se	a	UWI: N	N/NW /0/9	S/21/E/25/0/0/26/PM	I/N/807/W/0/885/0/0
.evel) Date	Time	Duration	Phase	Code	Sub	P/U MD Fro	m Operation
	Start-End	(hr)		1 1000	Code	(usft)	
	10:15 - 17:00	6.75	COMP	31	ľ	P	UNLAND TBG HANGER, PU & RIH 18 JTS. 2-3/8 L-80 TBG F/ TRAILER, TAG FILL @ 9746' BTM PERF @ 9722', POOH & LD 18 JTS. ON TRAILER, POOH & LD 53 JTS. ON TBG SEALS, LAND TBG HANGER, RU SWAB EQUIPMENT, RIH W/ 1.9 BROACH & BROACH TBG TO 7547', POOH, LD SWAB EQUIPMENT, RD FLOOR & TBG EQUIPMENT, ND BOP'S, NU WH, RDMO. MOVE TO NBU 921-25DICS. TBG DETAIL: KB
	7.00					_	PBTD @ 9760'
5/22/2012	7:00 - 7:15	0.25	COMP	48	-	P	JSA-SAFETY MEETING
	7:15 - 12:00	4.75	COMP	30	E	P	MIRU SERVICE UNIT, 1000# ON WELL, BLOW DN ON SALE LINE, PUMP 40 BBLS WTR DN TBG, CSG ON SALE
	12:00 - 13:30	1.50	COMP	30	F	P	N/D WH, N/U BOPS AND TBG EQUIP, TEST BOPS PIPE RAMS W/ RAMS LEAKING, NEW RAM BLOCK IN BOPS,
	13:30 - 15:30	2.00	COMP	46	F	S	WAIT ON WEATHERORD BOPS SERVICE HAND, CHANGE OUT 2 3/8" RAM BLOCKS, RETEST BOPS, OK, ((OLD RAMS BLOCK LOOK OK ALSO?))
	15:30 - 17:30	2.00	COMP	31	i	P .	TALLY AND BROACH TBG, RIH W/ 53 JTS 2 3/8" L-80 TBG, LAND TBG IN W/ TBG HANGER, N/D BOPS, N/U WH, TURN WELL OVER TO PRODUCTION,
							KB = 14.00' HANGER = .83' 291 JTS 2 3/8" L-80 TBG = 9207.53' XN-NIPPLE 1.875 = 2.20' EOT = 9224.56'

Project: UTAH - UTM (feet), NAD27, Zone 12N Site: UINTAH_NBU 921-25D PAD Well: NBU 921-25D1BS

Wellbore: NBU 921-25D1BS

Section: SHL:

Design: NBU 921-26D1BS (wp01) ENSIGN 146

Latitude: 40.012065 Longitude: -109.505662

GL: 4941.00 KB: (14' RKB + 4941' GL) @ 4955.00ft (ENSIGN 146)

FORMATION TOP DETAILS

TVD 2426.29

TVDPath 4818.00 7558.00 8507.00 9060.00

MDPath 4917.94 7657.98 8606.99 9159.99

Formation Top Wasatch (top of cylinder) Top Mesaverde MVL1

CASING DETAILS



Weatherford



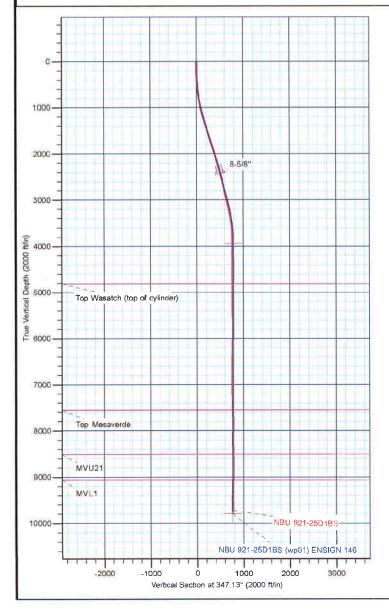
Azimuths to True North Magnetic North: 11.12*

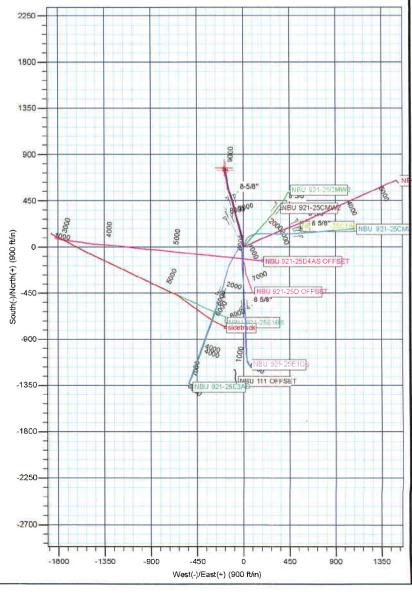
Magnetic Field Strength: 52370.0snT Dip Angle: 65.89° Date: 2/7/2011 Model: IGRF2010

WELL DETAILS: N	BU 921-25D1BS		
Ground Level: Easting	4941.00 Latittude	Longitude	Slot
2058853 10	40 012065	-109 505662	100000

+N/-S 0.00	+E/-W 0.00	Northing 14533946.43	Easting 2058853.10	Latittude 40.012065		gitude 05662	Slot	242023 24	3-55	50.5	Ψ ,	Model: IGRF201
							Design target d	ETAILS				
di in	tercept	arget (25D1BS) t top of cylinde -25D1BS BHL		TVD 3938.00 4818.00 9788.00	+N/-S 771.26 767.68 746.26	+E/-W -185.55 -183.40 -170.55	Northing 14534714.47 14534710.93 14534689.73	Easting 2058654.64 2058656.85 2058670.05	Latitude 40.014183 40.014173 40.014114	Longitude -109.506325 -109.506317 -109.506271	Shape Circle (Radius Point Circle (Radius	,

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
2468.00	15.39	343.09	2400.32	490.00	-119.20	0.00	0.00	504.24
2618.00	15.39	343.09	2544.95	528.08	-130.78	0.00	0.00	543.95
2703.15	14.11	347.51	2627.29	549.03	-136.32	2.00	140.81	565.60
3231.64	14.11	347.51	3139.83	674.82	-164.18	0.00	0.00	694.43
4037.93	0.00	146.31	3938.00	771.26	-185.55	1.75	180.00	793.21
4133.89	0.29	149.04	4033.95	771.05	-185.43	0.30	149.04	792.99
9888.00	0.29	149.04	9788.00	746.26	-170.55	0.00	0.00	765.50





Survey Report



Company:

US ROCKIES REGION PLANNING

Project:

UTAH - UTM (feet), NAD27, Zone 12N

Site:

UINTAH_NBU 921-25D PAD

Well: Wellbore: NBU 921-25D1BS

Design:

NBU 921-25D1BS NBU 921-25D1BS Local Co-ordinate Reference:

TVD Reference: MD Reference:

Well NBU 921-25D1BS

(14' RKB + 4941' GL) @ 4955.00ft (ENSIGN

(14' RKB + 4941' GL) @ 4955.00ft (ENSIGN

146) True

North Reference:

Survey Calculation Method:

Database:

Minimum Curvature

edm5000p

Project

UTAH - UTM (feet), NAD27, Zone 12N

Map System: Geo Datum: Map Zone:

Universal Transverse Mercator (US Survey Fee System Datum:

NAD 1927 (NADCON CONUS)

Zone 12N (114 W to 108 W)

Mean Sea Level

Site

UINTAH_NBU 921-25D PAD

Site Position:

Northing:

14,533,953,48 ft

40.012084

From: **Position Uncertainty:** Lat/Long

Easting: Slot Radius: 2,058,860.26 ft

Longitude: Grid Convergence: -109.505636

0.96°

Well

NBU 921-25D1BS

Well Position

+N/-S

+E/-W

0.00 ft 0.00 ft

0.00 ft

Northing: Easting:

14,533,946.44 ft 2,058,853.09 ft Latitude:

40.012065

Position Uncertainty

0.00 ft

Wellhead Elevation:

Longitude: **Ground Level:**

-109.505662 4,941.00 ft

Wellbore

NBU 921-25D1BS

Magnetics

Model Name Sample Date Declination (°)

Dip Angle

Field Strength (nT)

IGRF2010

2/7/2011

10.00

52.370

Design

NBU 921-25D1BS

Audit Notes:

Version:

1.0

Phase:

ACTUAL

Tie On Depth:

10.00

Vertical Section:

Depth From (TVD)

+N/-S

+E/-W (ft)

(°)

Direction

(ft) 0.00 0.00

346.33

Survey Program From

(ft)

(ft)

Date 7/25/2011

Survey (Wellbore)

Tool Name

Description

165.00 2,533.00 2,468.00 Survey #1 (NBU 921-25D1BS) 9,818.00 Survey #2 (NBU 921-25D1BS) MWD MWD MWD - Standard MWD - Standard

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
10.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00
165.00	0.41	163.69	165.00	-0.53	0.16	-0.55	0.26	0.26	0.00
223.00	0.11	342.63	223.00	-0.68	0.20	-0.71	0.90	-0.52	308.52
311.00	1.14	359.35	310.99	0.28	0.16	0.23	1.18	1.17	19.00
398.00	3.19	356.66	397.93	3.56	0.01	3.46	2.36	2.36	-3.09
488.00	4.66	354.61	487.71	9.70	-0.48	9.54	1.64	1.63	-2.28
578.00	6.00	356.19	577.32	18.03	-1.13	17.79	1.50	1.49	1.76
668.00	7.56	354.34	666.69	28.62	-2.03	28.29	1.75	1.73	-2.06

Survey Report



Company:

US ROCKIES REGION PLANNING

Project:

UTAH - UTM (feet), NAD27, Zone 12N

Site:

UINTAH_NBU 921-25D PAD

Well: Wellbore: NBU 921-25D1BS NBU 921-25D1BS

Design:

NBU 921-25D1BS

Local Co-ordinate Reference:

Survey Calculation Method:

TVD Reference:

MD Reference:

Database:

North Reference:

Well NBU 921-25D1BS

(14' RKB + 4941' GL) @ 4955.00ft (ENSIGN

(14' RKB + 4941' GL) @ 4955.00ft (ENSIGN

146)

True

Minimum Curvature

edm5000p

Measured			Vertical	<u>.</u>	<u> </u>	Vertical	Dogleg	Build	Turn
Depth (ft)	Inclination (°)	Azimuth (°)	Depth (ft)	+N/-S (ft)	+E/-W (ft)	Section (ft)	Rate (°/100ft)	Rate (°/100ft)	Rate (°/100ft)
758.00	8.88	353.02	755.76	41.41	-3.46	41.05	1.48	1.47	-1.4
848.00	10.48	348.86	844.48	56.33	-5.88	56.13	1.94	1.78	-4.6
938.00	11.82	345.52	932.78	73.29	-9.77	73.52	1.65	1.49	-3.7
1,028.00	13.19	344.30	1,020.64	92.10	-14.85	93.00	1.55	1.52	-1.30
1,118.00	14.60	347.05	1,108.01	113.04	-20.18	114.61	1.73	1.57	3.0
1,208.00	15.87	347.76	1,194.84	136.12	-25.33	138.25	1.43	1.41	0.7
1,298.00	16.57	346.88	1,281.26	160.65	-30.85	163.39	0.82	0.78	-0.9
1,388.00	16.80	345.55	1,367.47	185.74	-37.01	189.23	0.50	0.26	-1.4
1,478.00	17.01	345.50	1,453.58	211.08	-43.55	215.39	0.23	0.23	-0.0
1,568.00	17.37	344.73	1,539.56	236.79	-50.38	241.99	0.47	0.40	-0.8
1,658.00	18.08	342.05	1,625.29	263.03	-58.23	269.34	1.20	0.79	-2.9
1,748.00	17.87	342.79	1,710.90	289.51	-66.61	297.05	0.34	-0.23	0.8
1,838.00	17.44	344.74	1,796.66	315.71	-74.25	324.32	0.81	-0.48	2.1
1,928.00	17.33	347.41	1,882.55	341.80	-80.72	351.20	0.89	-0.12	2.9
2,018.00	17.77	347.09	1,968.36	368.27	-86.71	378.33	0.50	0.49	-0.3
2,108.00	16.78	347.28	2,054.30	394.33	-92.64	405.06	1.10	-1.10	0.2
2,198.00	16.15	345.47	2,140.61	419.12	-98.64	430.56	0.90	-0.70	-2.0
2,288.00	16.05	343.58	2,227.08	443.17	-105.30	455.51	0.59	-0.11	-2.1
2,378.00	15.77	343.58	2,313.63	466.84	-112.27	480.15	0.31	-0.31	0.0
2,468.00	15.39	343.09	2,400.32	490.00	-119.20	504.29	0.45	-0.42	-0.5
2,533.00	14.93	340.70	2,463.06	506.15	-124.48	521.23	1.19	-0.71	-3.6
2,623.00	14.25	337.87	2,550.16	527.36	-132.49	543.73	1.09	-0.76	-3.1
2,714.00	12.63	339.34	2,638.67	547.04	-140.22	564.68	1.82	-1.78	1.6
2,805.00	12.00	341.12	2,727.57	565.30	-146.79	583.98	0.81	-0.69	1.9
2,895.00	12.63	350.37	2,815.51	583.86	-151.46	603.11	2.30	0.70	10.2
2,986.00	12.75	351.75	2,904.29	603.60	-154.57	623.03	0.36	0.13	1.5
3,077.00	13.63	352.12	2,992.88	624.16	-157.48	643.70	0.97	0.97	0.4
3,167.00	13.25	347.00	3,080.42	644.72	-161.25	664.56	1.39	-0.42	-5.6
3,258.00	12.56	352.25	3,169.13	664.68	-164.93	684.83	1.49	-0.76	5.7
3,349.00	11.69	348.87	3,258.10	683.53	-168.05	703.88	1.23	-0.96	-3.7
3,439.00	10.38	350.25	3,346.43	700.47	-171.18	721.08	1.48	-1.46	1.5
3,530.00	8.69	354.12	3,436.17	715.39	-173.27	736.07	1.99	-1.86	4.2
3,621.00	6.13	344.37	3,526.41	726.91	-175.29	747.74	3.12	-2.81	-10.7
3,711.00	4.88	340.25	3,615.99	735.14	-177.87	756.35	1.46	-1.39	-4.5
3,802.00	3.94	330.25	3,706.72	741.50	-180.73	763.21	1.33	-1.03	-10.9
3,893.00	3.06	322.25	3,797.55	746.13	-183.77	768.43	1.10	-0.97	-8.7
3,983.00	1.31	334.00	3,887.48	748.96	-185.69	771.63	2.00	-1.94	13.0
4,074.00	0.69	69.50	3,978.47	750.08	-185.64	772.71	1.69	-0.68	104.9
4,165.00	0.38	45.87	4,069.47	750.49	-184.91	772.93	0.41	-0.34	-25.9
4,255.00	0.25	155.44	4,159.47	750.52	-184.61	772.88	0.58	-0.14	121.7
4,346.00	0.88	159.75	4,250.46	749.68	-184.29	772.00	0.69	0.69	4.7

APC Survey Report



Company:

US ROCKIES REGION PLANNING

Project:

UTAH - UTM (feet), NAD27, Zone 12N

Site:

UINTAH_NBU 921-25D PAD

Well: Wellbore: NBU 921-25D1BS NBU 921-25D1BS NBU 921-25D1BS Local Co-ordinate Reference:

Survey Calculation Method:

TVD Reference:

MD Reference:

North Reference:

Database:

Well NBU 921-25D1B\$

(14' RKB + 4941' GL) @ 4955.00ft (ENSIGN

146)

(14' RKB + 4941' GL) @ 4955.00ft (ENSIGN

146)

True

Minimum Curvature

edm5000p

Design: Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ff)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,527.00	0.50	230.25	4,431.43	746.47	-183.80	768.76	1.50	-1.11	70.56
4,618.00	0.69	15.75	4,522.43	746.74	-183.96	769.06	1.25	0.21	159.89
4,709.00	0.31	65.12	4,613.43	747.37	-183.59	769.59	0.60	-0.42	54.25
4,799.00	1.50	37.75	4,703.41	748.40	-182.65	770.37	1.37	1.32	-30.41
4,890.00	1.19	48.75	4,794.39	749.97	-181.21	771.55	0.44	-0.34	12.09
4,981.00	0.81	67.37	4,885.37	750.84	-179.90	772.09	0.54	-0.42	20.46
5,071.00	0.63	97.62	4,975.37	751.02	-178.82	772.01	0.46	-0.20	33.61
5,162.00	0.88	118.87	5,066.36	750.62	-177.72	771.35	0.41	0.27	23.35
5,253.00	1.00	39.87	5,157.35	750.89	-176.60	771.35	1.32	0.13	-86.81
5,344.00	1.13	35.25	5,248.34	752.23	-175.57	772.41	0.17	0.14	-5.08
5,434.00	1.06	32.75	5,338.32	753.65	-174.61	773.57	0.09	-0.08	-2.78
5,525.00	0.94	44.00	5,429.31	754.90	-173.63	774.55	0.25	-0.13	12.36
5,615.00	0.81	43.50	5,519.29	755.89	-172.68	775.29	0.14	-0.14	-0.56
5,706.00	1.06	38.50	5,610.28	757.02	-171.71	776.15	0.29	0.27	-5.49
5,797.00	0.88	36.12	5,701.27	758.24	-170.78	777.12	0.20	-0.20	- 2.62
5,887.00	1.06	237.00	5,791.26	758.35	-171.07	777.29	2.12	0.20	-176.80
5,978.00	0.69	213.00	5,882.25	757.43	-172.07	776.64	0.56	-0.41	-26.37
6,069.00	0.81	196.62	5,973.25	756.35	-172.56	775.71	0.27	0.13	-18.00
6,159.00	1.00	186.50	6,063.24	754.96	-172.83	774.42	0.28	0.21	-11.24
6,250.00	1.00	187.37	6,154.22	753.39	-173.02	772.93	0.02	0.00	0.96
6,340.00	1.20	180.27	6,244.20	751.66	-173.12	771.29	0.27	0.22	-7.89
6,431.00	1.50	175.37	6,335.18	749.52	-173.03	769.18	0.35	0.33	-5.38
6,521.00	1.38	155.87	6,425.15	747.36	-172.49	766.96	0.56	-0.13	-21.67
6,612.00	0.34	130.37	6,516.14	746.19	-171.84	765.66	1.19	-1.14	-28.02
6,703.00	0.75	151.62	6,607.14	745.49	-171.35	764.86	0.49	0.45	23.35
6,793.00	0.44	195.75	6,697.13	744.64	-171.17	763.99	0.59	-0.34	49.03
6,884.00	0.69	304.37	6,788.13	744.61	-171.71	764.10	1.02	0.27	119.36
6,975.00	0.56	310.62	6,879.12	745.21	-172.50	764.87	0.16	-0.14	6.87
7,066.00	0.25	274.50	6,970.12	745.51	-173.04	765.29	0.43	-0.34	-39.69
7,156.00	1.00	352.12	7,060.12	746,31	-173.34	766.13	1.09	0.83	86.24
7,247.00	0.94	348.75	7,151.10	747.83	-173.60	767.67	0.09	-0.07	-3.70
7,338.00	1.75	310.87	7,242.08	749.47	-174.79	769.54	1.28	0.89	-41.63
7,428.00	1.75	313.25	7,332.04	751.31	-176.83	771.82	0.08	0.00	2.64
7,519.00	1.31	298.12	7,423.00	752.75	-178.76	773.67	0.65	-0.48	-16.63
7,610.00	1.25	284.25	7,513.98	753.48	-180.64	774.83	0.35	-0.07	-15.24
7,700.00	1.19	281.00	7,603.96	753.90	-182.51	775.68	0.10	-0.07	-3.61
7,791.00		269.62	7,694.94	754.08	-184.34	776.28	0.26	-0.07	-12.51
7,881.00		261.62	7,784.92	753.89	-186.49	776.60	0.59	0.56	-8.89
7,972.00	1.69	241.00	7,875.88	753.05	-188.94	776.37	0.66	0.07	-22.66
8,063.00	2.13	213.75	7,966.83	750.99	-191.06	774.87	1.09	0.48	-29.95
8,153.00	2.31	208.25	8,056.76	748.00	-192.84	772.39	0.31	0.20	-6.11
8,249.00		257.00	8,152.73	746.20	-194.17	770.95	2.10	-1.89	50.78

APC Survey Report



Company:

US ROCKIES REGION PLANNING

Project:

UTAH - UTM (feet), NAD27, Zone 12N

Site:

UINTAH_NBU 921-25D PAD

Well: Wellbore: NBU 921-25D1BS NBU 921-25D1BS

Design:

NBU 921-25D1BS

Local Co-ordinate Reference:

Survey Calculation Method:

TVD Reference: MD Reference:

North Reference:

Database:

Well NBU 921-25D1BS

(14' RKB + 4941' GL) @ 4955.00ft (ENSIGN

146)

(14' RKB + 4941' GL) @ 4955.00ft (ENSIGN

146)

True

Minimum Curvature

edm5000p

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
8,340.00	1.07	36.54	8,243.73	746.80	-194.05	771.50	1.63	0.63	153.34	0.000
8,431.00	1.06	37.50	8,334.71	748.15	-193.03	772.57	0.02	-0.01	1.05	
8,521.00	0.81	62.37	8,424.70	749.10	-191.96	773.25	0.52	-0.28	27.63	
8,612.00	2.00	51.75	8,515.67	750.38	-190.14	774.06	1.33	1.31	-11.67	
8,703.00	1.81	47.12	8,606.62	752.34	-187.84	775.43	0.27	-0.21	-5.09	
8,794.00	1.88	62.25	8,697.57	754.02	-185.47	776.49	0.54	0.08	16.63	
8,884.00	1.69	72.87	8,787.53	755.10	-182.89	776.93	0.42	-0.21	11.80	
8,975.00	1.81	92.12	8,878.49	755.44	-180.18	776.62	0.66	0.13	21.15	
9,066.00	1.88	87.87	8,969.44	755.44	-177.25	775.93	0.17	0.08	-4.67	
9,156.00	1.94	99.62	9,059.39	755.24	-174.27	775.03	0.44	0.07	13.06	
9,247.00	1.56	97.00	9,150.35	754.83	-171.52	773.99	0.43	-0.42	-2.88	
9,338.00	1.38	109.37	9,241.32	754.32	-169.26	772.95	0.40	-0.20	13.59	
9,428.00	1.38	117.50	9,331.29	. 753.46	-167.28	771.65	0.22	0.00	9.03	
9,519.00	1.50	123.37	9,422.27	752.30	-165.31	770.05	0.21	0.13	6.45	
9,610.00	1.63	117.37	9,513.23	751.05	-163.16	768.33	0.23	0.14	-6.59	
9,700.00	1.75	113.62	9,603.19	749.91	-160.77	766.66	0.18	0.13	-4.17	
9,768.00	1.85	121.45	9,671.16	748.92	-158.88	765.25	0.39	0.15	11.51	
last MWD	survey									
9,818.00	1.92	127.21	9,721.13	747.99	-157.53	764.03	0.40	0.14	11.52	
projection	1									

9,81	8.00	9,721.13	747.99	-157.53	projection
9,76	00.8	9,671.16	748.92	-158.88	last MWD survey
Design Annotations Measu Dept (ft)	ired '	Vertical Depth (ft)	Local Coo +N/-S (ft)	ordinates +E/-W (ft)	Comment

Checked By:	Approved By:	Date:	

US ROCKIES REGION PLANNING

UTAH - UTM (feet), NAD27, Zone 12N UINTAH_NBU 921-25D PAD NBU 921-25D1BS

NBU 921-25D1BS

Design: NBU 921-25D1BS

Survey Report - Geographic

25 July, 2011



Survey Report - Geographic



Company:

US ROCKIES REGION PLANNING

Project:

UTAH - UTM (feet), NAD27, Zone 12N

Local Co-ordinate Reference: TVD Reference:

Well NBU 921-25D1BS

(14' RKB + 4941' GL) @ 4955.00ft (ENSIGN

146)

Site: UINTAH NBU 921-25D PAD

146) True

(14' RKB + 4941' GL) @ 4955.00ft (ENSIGN

North Reference:

Survey Calculation Method:

Minimum Curvature

edm5000p

Wellbore: Design:

Well:

NBU 921-25D1BS NBU 921-25D1BS NBU 921-25D1BS

Database:

MD Reference:

Project UTAH - UTM (feet), NAD27, Zone 12N

Map System:

Universal Transverse Mercator (US Survey Fee System Datum:

Mean Sea Level

Geo Datum:

NAD 1927 (NADCON CONUS)

Zone 12N (114 W to 108 W) Map Zone:

Site

UINTAH NBU 921-25D PAD

Site Position:

Northing:

14,533,953.48 ft

Latitude:

From: **Position Uncertainty:** Lat/Long 0.00 ft Easting: Slot Radius: 2,058,860.26 ft ი "

Longitude: **Grid Convergence:**

40.012084 -109.505636

0.96°

Well

NBU 921-25D1BS

Well Position

0.00 ft

Northing:

14.533.946.44 ft

Latitude:

+E/-W

0.00 ft

Easting:

2,058,853.09 ft

40.012065

Position Uncertainty

0.00 ft

Wellhead Elevation:

Longitude: **Ground Level:**

-109.505662 4,941.00 ft

Wellbore

NBU 921-25D1BS

Magnetics

Model Name

Sample Date

Declination (°)

Dip Angle

Field Strength (nT)

346.33

IGRF2010

2/7/2011

10.00

65.89

52 370

Design

NBU 921-25D1BS

Audit Notes:

Version:

1.0

Phase:

ACTUAL

Tie On Depth:

0.00

10.00

Depth From (TVD)

+E/-W

Direction

Vertical Section:

+N/-S

(ft)

(ft) 0.00 (ft)

(°)

Date 7/25/2011

Survey Program From (ft)

To (ft)

Survey (Wellbore)

Tool Name

Description

165.00 2,533.00

2,468.00 Survey #1 (NBU 921-25D1BS) 9,818.00 Survey #2 (NBU 921-25D1BS) MWD MWD MWD - Standard MWD - Standard

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
10.00	0.00	0.00	10.00	0.00	0.00	14,533,946.44	2,058,853.09	40.012065	-109.505662
165.00	0.41	163.69	165.00	-0.53	0.16	14,533,945.91	2,058,853.26	40.012064	-109.505662
223.00	0.11	342.63	223.00	-0.68	0.20	14,533,945.76	2,058,853.30	40.012063	-109.505662
311.00	1.14	359.35	310.99	0.28	0.16	14,533,946.72	2,058,853.25	40.012066	-109.505662
398.00	3.19	356.66	397.93	3.56	0.01	14,533,950.00	2,058,853.04	40.012075	-109.505662
488.00	4.66	354.61	487.71	9.70	-0.48	14,533,956.13	2,058,852.45	40.012092	-109.505664
578.00	6.00	356.19	577.32	18.03	-1.13	14,533,964.45	2,058,851.66	40.012115	-109.505666
668.00	7.56	354.34	666.69	28.62	-2.03	14,533,975.02	2,058,850.58	40.012144	-109.505670
758.00	8.88	353.02	755.76	41.41	-3.46	14,533,987.78	2,058,848.94	40.012179	-109.505675

APC

Survey Report - Geographic



Company:

US ROCKIES REGION PLANNING

Project:

UTAH - UTM (feet), NAD27, Zone 12N

Site:

UINTAH_NBU 921-25D PAD

Well: Wellbore: NBU 921-25D1BS NBU 921-25D1BS

Design:

NBU 921-25D1BS

Local Co-ordinate Reference:

TVD Reference:

MD Reference:

Well NBU 921-25D1BS

(14' RKB + 4941' GL) @ 4955.00ft (ENSIGN

146)

(14' RKB + 4941' GL) @ 4955.00ft (ENSIGN

146)

North Reference: True

Survey Calculation Method:

Database:

Minimum Curvature

edm5000p

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
848.00	10.48	348.86	844.48	56.33	-5.88	14,534,002.67	2,058,846.26	40.012220	-109.505683
938.00		345.52	932.78	73.29	-9.77	14,534,019.56	2,058,842.09	40.012266	-109.505697
1,028.00	13.19	344.30	1,020.64	92.10	-14.85	14,534,038.28	2,058,836.70	40.012318	-109.505715
1,118.00		347.05	1,108.01	113.04	-20.18	14,534,059.13	2,058,831.02	40.012375	-109.505734
1,208.00		347.76	1,194.84	136.12	-25.33	14,534,082.12	2,058,825.49	40.012439	-109.505753
1,298.00		346.88	1,281.26	160.65	-30.85	14,534,106.55	2,058,819.55	40.012506	-109.505772
1,388.00		345.55	1,367.47	185.74	-37.01	14,534,131.53	2,058,812.98	40.012575	-109.505794
1,478.00		345.50	1,453.58	211.08	-43.55	14,534,156.76	2,058,806.01	40.012645	-109.505818
1,568.00		344.73	1,539.56	236.79	-50.38	14,534,182.35	2,058,798.75	40.012715	-109.505842
1,658.00		342.05	1.625.29	263.03	-58.23	14,534,208.46	2,058,790.46	40.012787	-109.505870
1,748.00		342.79	1,710.90	289.51	-66.61	14,534,234.79	2,058,781.63	40.012860	-109.505900
1,838.00		344.74	1,796.66	315.71	-74.25	14,534,260.86	2,058,773.56	40.012932	-109.505927
1,928.00		347.41	1,882.55	341.80	-80.72	14,534,286.84	2,058,766.65	40.013004	-109.505951
2,018.00		347.09	1,968.36	368.27	-86.71	14,534,313.21	2,058,760.22	40.013076	-109.505972
2,108.00		347.28	2,054.30	394.33	-92.64	14,534,339.16	2,058,753.85	40.013148	-109.505993
2,198.00		345.47	2,140.61	419.12	-98.64	14,534,363.85	2,058,747.43	40.013216	-109.506014
2,288.00		343.58	2,227.08	443.17	-105.30	14,534,387.78	2,058,740.37	40.013282	-109.506038
2,378.00		343.58	2,313.63	466.84	-112.27	14,534,411.33	2,058,733.00	40.013347	-109.506063
2,468.00		343.09	2,400.32	490.00	-119.20	14,534,434.37	2,058,725.69	40.013410	-109.506088
2,533.00		340.70	2,463.06	506.15	-124.48	14,534,450.43	2,058,720.14	40.013455	-109.506107
2,623.00		337.87	2,550.16	527.36	-132.49	14,534,471.50	2,058,711.78	40.013513	-109.506135
2,714.00		339.34	2.638.67	547.04	-140.22	14,534,491.05	2,058,703.72	40.013567	-109.506163
2,805.00		341.12	2,727.57	565.30	-146.79	14,534,509.20	2,058,696.85	40.013617	-109.506186
2,895.00		350.37	2,815.51	583.86	-151.46	14,534,527.67	2,058,691.86	40.013668	-109.506203
2,986.00		351.75	2,904.29	603.60	-154.57	14,534,547.36	2,058,688.42	40.013722	-109.506214
3,077.00		352.12	2,992.88	624.16	-157.48	14,534,567.87	2,058,685.17	40.013779	-109.506225
3,167.00		347.00	3,080.42	644.72	-161.25	14,534,588.36	2,058,681.05	40,013835	-109.506238
3,258.00		352.25	3,169.13	664.68	-164.93	14,534,608.26	2,058,677.04	40.013890	-109.506251
3,349.00		348.87	3,258.10	683.53	-168.05	14,534,627.06	2,058,673.61	40.013942	-109.506262
3,439.00		350.25	3,346.43	700.47	-171.18	14,534,643.94	2,058,670.19	40.013988	-109.506274
3,530.00		354.12	3,436.17	715,39	-173.27	14,534,658.82	2,058,667.85	40.014029	-109.506281
3,621.00		344.37	3,526.41	726.91	-175.29	14,534,670.31	2,058,665.64	40.014061	-109.506288
3,711.00		340.25	3,615.99	735.14	-177.87	14,534,678.49	2,058,662.91	40.014084	-109.506297
3,802.00		330.25	3,706.72	741.50	-180.73	14,534,684.80	2,058,659.95	40.014101	-109.506308
3,893.00		322.25	3,797.55	746.13	-183.77	14,534,689.39	2,058,656.83	40.014114	-109.506318
3,983.00		334.00	3,887.48	748.96	-185.69	14,534,692.18	2,058,654.86	40.014122	-109.506325
4,074.00			3,978.47	750.08	-185.64	14,534,693.30	2,058,654.90	40.014125	-109.506325
4,165.00		45.87	4,069.47	750.49	-184.91	14,534,693.72	2,058,655.63	40.014126	-109.506323
4,255.00			4,159.47	750.52	-184.61	14,534,693.75	2,058,655.92	40.014126	-109.506321
4,346.00			4,250.46	749.68	-184.29	14,534,692.92	2,058,656.26	40.014123	-109.506320
4,437.00		166.75	4,341.44	747.86	-183.77	14,534,691.12	2,058,656.80	40.014118	-109.506318
4,527.00			4,431.43	746.47	-183.80	14,534,689.72	2,058,656.80	40.014115	-109.506319
4,618.00		15.75	4,522.43	746.74	-183.96	14,534,689.99	2,058,656.63	40.014115	-109.506319
4,709.00			4,613.43	747.37	-183.59	14,534,690.63	2,058,657.00	40.014117	-109.506318
4,799.00		37.75	4,703.41	748.40	-182.65	14,534,691.68	2,058,657.92	40.014120	-109.506314
4,890.00			4,794.39	749.97	-181.21	14,534,693.26	2,058,659.33	40.014124	-109.506309
4,981.00		67.37	4,885.37	750.84	-179.90	14,534,694.16	2,058,660.62	40.014127	-109.506305
5,071.00			4,975.37	751.02	-178.82	14,534,694.35	2,058,661.70	40.014127	-109.506301
5,162.00			5,066.36	750.62	-177.72	14,534,693.97	2,058,662.81	40.014126	-109.506297
5,253.00		39.87	5,157.35	750.89	-176.60	14,534,694.26	2,058,663.93	40.014127	-109.506293
5,344.00			5,248.34	752.23	-175.57	14,534,695.62	2,058,664.93	40.014130	-109.506289
5,434.00			5,338.32	753.65	-174.61	14,534,697.06	2,058,665.87	40.014134	-109.506286
5,525.00			5,429.31	754.90	-173.63	14,534,698.32	2,058,666.82	40.014138	-109.506282

Survey Report - Geographic



Company:

US ROCKIES REGION PLANNING

Project:

UTAH - UTM (feet), NAD27, Zone 12N

Site:

UINTAH_NBU 921-25D PAD

Well: Wellbore: NBU 921-25D1BS

Design:

NBU 921-25D1BS NBU 921-25D1BS

Local Co-ordinate Reference:

TVD Reference:

MD Reference:

Well NBU 921-25D1BS

(14' RKB + 4941' GL) @ 4955.00ft (ENSIGN

(14' RKB + 4941' GL) @ 4955.00ft (ENSIGN

146) True

North Reference:

Survey Calculation Method:

Database:

Minimum Curvature

edm5000p

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
Karana ka	Say Likeran banda da P		DARKEN CARLES				Commence of the Commence of th		
5,615.00		43.50	5,519.29	755.89	-172.68	14,534,699.33	2,058,667.76	40.014141	-109.50627
5,706.00		38.50	5,610.28	757.02	-171.71	14,534,700.47	2,058,668.71	40.014144	-109.50627
5,797.00		36.12	5,701.27	758.24	-170.78	14,534,701.71	2,058,669.62	40.014147	-109.50627
5,887.00		237.00	5,791.26	758.35	-171.07	14,534,701.81	2,058,669.33	40.014147	-109.50627
5,978.00		213.00	5,882.25	757.43	-172.07	14,534,700.87	2,058,668.34	40.014145	-109.50627
6,069.00		196.62	5,973.25	756.35	-172.56	14,534,699.79	2,058,667.88	40.014142	-109.50627
6,159.00		186.50	6,063.24	754.96	-172.83	14,534,698.40	2,058,667.63	40.014138	-109.50627
6,250.00		187.37	6,154.22	753.39	-173.02	14,534,696.82	2,058,667.46	40.014134	-109.50628
6,340.00		180.27	6,244.20	751.66	-173.12	14,534,695.09	2,058,667.39	40.014129	-109.50628
6,431.00		175.37	6,335.18	749.52	-173.03	14,534,692.96	2,058,667.51	40.014123	-109.50628
6,521.00		155.87	6,425.15	747.36	-172.49	14,534,690.80	2,058,668.09	40.014117	-109.50627
6,612.00		130.37	6,516.14	746.19	-171.84	14,534,689.64	2,058,668.76	40.014114	-109.50627
6,703.00		151.62	6,607.14	745.49	-171.35	14,534,688.95	2,058,669.26	40.014112	-109.50627
6,793.00		195.75	6,697.13	744.64	-171.17	14,534,688.10	2,058,669.46	40.014110	-109.50627
6,884.00		304.37	6,788.13	744.61	-171.71	14,534,688.06	2,058,668.92	40.014110	-109.50627
6,975.00		310.62	6,879.12	745.21	-172.50	14,534,688.65	2,058,668.12	40.014111	-109.50627
7,066.00		274.50	6,970.12	745.51	-173.04	14,534,688.95	2,058,667.58	40.014112	-109.50628
7,156.00		352.12	7,060.12	746.31	-173.34	14,534,689.73	2,058,667.26	40.014114	-109.50628
7,247.00		348.75	7,151.10	747.83	-173.60	14,534,691.25	2,058,666.98	40.014118	-109.50628
7,338.00		310.87	7,242.08	749.47	-174.79	14,534,692.87	2,058,665.76	40.014123	-109.50628
7,428.00	1.75	313.25	7,332.04	751.31	-176.83	14,534,694.68	2,058,663.68	40.014128	-109.50629
7,519.00	1.31	298.12	7,423.00	752.75	-178.76	14,534,696.09	2,058,661.73	40.014132	-109.50630
7,610.00	1.25	284.25	7,513.98	753.48	-180.64	14,534,696.79	2,058,659.84	40.014134	-109.50630
7,700.00	1.19	281.00	7,603.96	753.90	-182.51	14,534,697.18	2,058,657.96	40.014135	-109.50631
7,791.00	1.13	269.62	7,694.94	754.08	-184.34	14,534,697.32	2,058,656.14	40.014136	-109.50632
7,881.00	1.63	261.62	7,784.92	753.89	-186.49	14,534,697.09	2,058,653.99	40.014135	-109.50632
7,972.00	1.69	241.00	7,875.88	753.05	-188.94	14,534,696.21	2,058,651.55	40.014133	-109.50633
8,063.00	2.13	213.75	7,966.83	750.99	-191.06	14,534,694.12	2,058,649.47	40.014127	-109.50634
8,153.00	2.31	208.25	8,056.76	748.00	-192.84	14,534,691.10	2,058,647.73	40.014119	-109.50635
8,249.00	0.50	257.00	8,152.73	746.20	-194.17	14,534,689.28	2,058,646.44	40.014114	-109.50635
8,340.00	1.07	36.54	8,243.73	746.80	-194.05	14,534,689.88	2,058,646.55	40.014116	-109.50635
8,431.00	1.06	37.50	8,334.71	748.15	-193.03	14,534,691.24	2,058,647.54	40.014119	-109.50635
8,521.00	0.81	62.37	8,424.70	749.10	-191.96	14,534,692.22	2,058,648.60	40.014122	-109.50634
8,612.00	2.00	51.75	8,515.67	750.38	-190.14	14,534,693.53	2,058,650.39	40.014125	-109.50634
8,703.00	1.81	47.12	8,606.62	752.34	-187.84	14,534,695.53	2,058,652.66	40.014131	-109.50633
8,794.00	1.88	62.25	8,697.57	754.02	-185.47	14,534,697.24	2,058,655.00	40.014135	-109.50632
8.884.00	1.69	72.87	8.787.53	755.10	-182.89	14,534,698,36	2.058.657.56	40.014138	-109.5063°
8,975.00	1.81	92.12	8,878.49	755.44	-180.18	14,534,698.75	2,058,660.27	40.014139	-109.50630
9,066.00		87.87	8,969.44	755.44	-177.25	14,534,698.80	2,058,663.20	40.014139	-109.50629
9,156.00	1.94	99.62	9,059.39	755.24	-174.27	14,534,698.65	2,058,666.18	40.014139	-109.50628
9,247.00		97.00	9,150.35	754.83	-171.52	14,534,698.29	2,058,668.93	40.014138	-109.5062
9,338.00		109.37	9,241.32	754.32	-169.26	14,534,697.81	2,058,671.21	40.014136	-109.5062
9,428.00		117.50	9,331.29	753.46	-167.28	14,534,696.99	2,058,673.20	40.014134	-109.5062
9,519.00		123.37	9,422.27	752.30	-165.31	14,534,695.86	2,058,675.19	40.014131	-109.5062
9,610.00		117.37	9,513.23	751.05	-163.16	14,534,694.64	2,058,677.35	40.014127	-109.5062
9,700.00		113.62	9,603.19	749.91	-160.77	14,534,693.55	2,058,679.77	40.014124	-109.5062
9,768.00		121.45	9,671.16	748.92	-158.88	14,534,692.59	2,058,681.67	40.014121	-109.5062
•	VD survey	121.40	0,071.10	7 10.02	.00.00	,001,002.00	2,500,001.01	10.01-1121	,00.0002
9,818.00		127.21	9,721.13	747.99	-157.53	14,534,691.68	2,058,683.04	40.014119	-109.50622
project		121.21	3,121.13	141.55	-101.00	17,00,100	2,000,000.04	#U.U1#118	~103.50022

Survey Report - Geographic



Company: Project:

US ROCKIES REGION PLANNING

UTAH - UTM (feet), NAD27, Zone 12N

Site:

UINTAH_NBU 921-25D PAD

Well: Wellbore: NBU 921-25D1BS NBU 921-25D1BS

Design:

NBU 921-25D1BS

Local Co-ordinate Reference:

TVD Reference:

MD Reference:

Well NBU 921-25D1BS

(14' RKB + 4941' GL) @ 4955.00ft (ENSIGN

(14' RKB + 4941' GL) @ 4955.00ft (ENSIGN

146) True

North Reference:

Survey Calculation Method:

Minimum Curvature

Database:

edm5000p

Design Annotations

9,818.00	9,721.13	747.99	-157.53	projection	
9,768.00	9,671.16	748.92	-158.88	last MWD survey	
Measured Depth (ft)	Vertical Depth (ft)	Local Coord +N/-S (ft)	inates +E/-W (ft)	Comment	

l	Checked By:	Approved By:	Date:	
L				